

Does Race Matter? Access and Service Use for Children by Race during 2002

Presented by



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AHCI is a contract agency for the Allegheny County Department of Human Services' HealthChoices Program.

About HealthChoices and AHCI

HealthChoices, Pennsylvania's managed care program for Medicaid, provides physical health care and behavioral health care services to both children and adults. The goals of Pennsylvania's HealthChoices program are to improve:

- Access to services;
- Quality of care;
- Continuity of the care provided in a multi-system environment; and
- Coordination and distribution of finite Medical Assistance resources.

Under HealthChoices, Allegheny County contracts with the Commonwealth of Pennsylvania to implement the behavioral health services portion of the program. Allegheny County has delegated responsibilities for managing the behavioral health program to two other organizations:

- The County contracts with Community Care Behavioral Health Organization (Community Care) to manage behavioral health services for the HealthChoices program.
- Allegheny County also contracts with Allegheny HealthChoices, Inc. (AHCI) to carry out the County's oversight and monitoring responsibilities required under the HealthChoices program.

This report is one of a series published by AHCI as part of its oversight and monitoring responsibilities. All AHCI reports can be downloaded from our Web site at www.ahci.org. For more information or additional copies of this report, please visit our Web site, contact us by phone at 412.325-1100, or email eheberlein@ahci.org or ranantaram@ahci.org.

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Executive Summary

The Surgeon General's Report on Mental Health and the supplemental report on Race, Culture and Ethnicity summarized national research on mental health and the treatment of mental disorders. These reports concluded that minorities were much less likely than Caucasians to access behavioral health care and receive high quality treatment, even though minorities and Caucasians have similar rates of mental disorders.

These national reports provide the context for Allegheny HealthChoices, Inc.'s (AHC) analysis of racial disparities in behavioral health services. In 2003, AHC reported that African-American children and youth enrolled in HealthChoices during 2002 accessed behavioral health services at lower rates than Caucasians. AHC developed this current report to further explore access and service use patterns by race for children and youth.

Access to behavioral health services in 2002 for African-Americans and Caucasians was examined by age groups, gender, status as a HealthChoices enrollee (how a child enrolled and how long a child was enrolled), and history of involvement with child welfare or juvenile justice services. Key findings include:

- Within age and gender groups, access rates for African-Americans were always lower than Caucasian access rates. Larger gaps were identified for the youngest group (0-5 year olds) and the oldest group (18-20 year olds). Age-specific outreach interventions should be explored.
- African-Americans, in all eligibility categories except for those where income is not considered, had lower access rates for treatment.
- Even when they had a history of involvement with child welfare or juvenile justice, African-American children and youth accessed behavioral health services at lower rates than Caucasians with histories of social service involvement. Additional results for these social service-involved groups will be published in a supplementary report to provide further data for discussion.

When access to specific behavioral health services was analyzed, African-Americans accessed each service at lower rates than Caucasians. Relatively larger differences in African-American and Caucasian access rates occurred for behavioral health rehabilitation services (BHRS), case management, family-based services and medication checks. Access rates for partial hospitalization services for African-Americans and Caucasians were the most similar.

Research has found that African-Americans may be more likely to leave treatment early. Research has also found that African-Americans disproportionately receive emergency care and treatment in psychiatric hospitals. Therefore, the analysis of service use by race also included comparisons of African-American and Caucasian rates of engagement, number of services used, and types of services used during 2002. Key findings include:

- African-Americans were not substantially more likely than Caucasians to access one behavioral health service and then not return.
- While outpatient mental health services were the most commonly used service type, low median usage indicated that consumers, regardless of race, very often had less than one hour of treatment. For some providers, this may mean that consumers came in for their intake/assessment and did not return for any treatment.
- African-Americans were somewhat more likely to access just one service type during 2002; Caucasians used multiple services in higher proportions than African-Americans.

- For each service examined, the range of units used at the individual consumer level varied greatly. A few consumers often used very large amounts of specific services.
- In addition to accessing BHRS, case management, family-based services, and residential treatment facilities (RTF) in lower proportions, African-Americans used fewer units of these services when they did use them.
- African-Americans used more units of partial hospitalization services than Caucasians. Because 80% or more of partial hospitalization services are school-based programs, and placement in these school-based programs is usually initiated by the school district, the role of the educational system in children's access to behavioral health services needs to be further examined.
- African-Americans' median cost was 70% of Caucasians' median cost. A larger gap was observed between genders than races. Females' median cost was 50% of males' median cost.

Because different disorders require different types and intensities of treatment, diagnostic patterns and service use data for different diagnoses were also analyzed. Key findings include:

- Overall, the diagnostic patterns by race were very similar.
However, the data suggests that African-American children may be under-diagnosed, or not diagnosed until older ages, with childhood psychoses (including autistic disorder, Asperger's disorder, and pervasive development disorder). Because of the importance of early intervention with children diagnosed with these disorders, these patterns should be further investigated.
- African-Americans were slightly more likely to be diagnosed with a conduct or emotional disturbance disorder, while Caucasians were more likely to be diagnosed with depression or neurotic disorders. This may suggest some unintentional biases in the diagnostic process, and results should be shared with providers.
- When the different diagnostic groups were examined, African-American and Caucasian treatment patterns were more similar than they were different.
However, the combination of higher use of BHRS by Caucasians, and their greater likelihood of using more than one service type, often resulted in Caucasians having higher costs for services.

AHCI's goal in publishing this report is to build on previous reports and provide the system with additional data on access and service use by race for children and youth. Comparing these results with 2003 data will be helpful in providing some insight on the effects of Community Care's outreach efforts since 2002.

The intention is for the report to be discussed and used to identify possible barriers to treatment and appropriate interventions. AHCI plans to collaborate with Allegheny County and Community Care in organizing discussions of these findings and their implications with providers, family members, and other systems, including the child welfare, juvenile probation, and educational systems. Specific issues for discussion should include, but not be limited to, access for children and youth involved with child welfare and juvenile justice systems, access to specific services, the role of the school district in referrals to partial hospitalization services, engagement in services for people entering the system through outpatient mental health services, early identification and intervention for children with autism, and potential biases in diagnoses.

We look forward to the opportunity to share these results with Allegheny County, Community Care, providers and other stakeholders, and are more than willing to complete additional analyses on this subject based on stakeholder questions and suggestions.

Introduction

In 2001, the Department of Health and Human Services released “Mental Health: Culture, Race and Ethnicity,” a supplemental report to the 1999 “Mental Health: A Report of the Surgeon General.” This supplement illustrates “striking disparities” for minorities in accessing behavioral health care and receiving high quality treatment, even though minorities and Caucasians have similar rates of mental disorders (SGR Supplement 3)*.

Interest in relating these national findings to the Allegheny County HealthChoices population resulted in AHCI’s analysis of behavioral health service access rates for African-American and Caucasian youth. Results published in 2003 indicated that 14% of enrolled Caucasian youth accessed services during 2002, compared to 9% of African-American youth.

The previous AHCI study provoked many additional questions on the issue of racial disparities in behavioral health care for the Allegheny County HealthChoices population. Stakeholders agreed that the report was informative, but more specific information would assist discussion and indicate possible system interventions to address any identified disparities. This report represents AHCI’s in-depth analysis of the 2002 data used in the previous report.

Research Questions

AHCI developed research questions primarily from research findings on racial and ethnic disparities summarized in the Surgeon General’s 1999 Report on Mental Health and the supplement on culture, race and ethnicity. Disparities in behavioral health care fall into two broad categories, access and quality of treatment. Both categories are explored in this report.

Access

Research has demonstrated that African-Americans access behavioral health care at lower rates than Caucasians (SGR Supplement 3). Many factors are thought to be associated with whether or not individuals who need behavioral health care decide to access treatment from a behavioral health professional (as opposed to other professionals, non-professionals, or not at all). These factors include insurance coverage, mistrust of service providers, and stigma (SGR Supplement 16, 28-30). Different treatment seeking patterns may also play a role; some research has shown African-Americans may seek care in higher proportions than Caucasians from their primary care physician (SGR Supplement 32), or from “informal” care givers, including clergy and family (SGR Supplement 28).

Why don’t we report on statistical significance?

Tests for *statistical significance* are used when the data being analyzed is a sample of the population. Often, it is very time-consuming and/or expensive to analyze an entire population, so a representative subgroup of the population, a *sample*, is selected for analysis. If results are *statistically significant*, the differences or trends in the sample can be generalized from the sample to the entire population. This is a very powerful tool in data analysis.

In this report, we did not test for statistical significance. We analyzed the entire HealthChoices population 20 years and younger, so any differences observed are actual differences in service access and use during 2002. Our interpretation of importance, or significance, is based on thresholds we set to establish *clinical significance* or *important differences*. Our assumptions and thresholds are explained further in the findings sections of the report.

* Citations for “Mental Health: A Report of the Surgeon General” are abbreviated as “SGR,” followed by the page reference. Citations for “Mental Health: Culture, Race and Ethnicity” are abbreviated as “SGR Supplement,” followed by the page reference. Because these reports are cited frequently, these abbreviations were used.

Evaluating differences in access rates must be considered in the context of *how many individuals have a need for treatment*. According to the DSM-IV,^{*} the prevalence (the proportion of people out of the population expected to have an illness) of some disorders varies by age and gender. However, “epidemiological research on children and youth provides little basis for conclusions about differences between African-Americans and whites” in the overall prevalence of mental illness (SGR Supplement 58). Differences in access rates may have many explanations, but lower prevalence of mental disorders in African-Americans is not one of them.

While overall prevalence rates should be assumed to be similar, several social and cultural factors or circumstances identified in the literature state African-Americans may be expected to have higher rates of some mental disorders than Caucasians. These factors include poverty, physical health problems, involvement with the child welfare system, and exposure to violence (SGR Supplement 39, 56, 62).

The nature of the available data limited how conclusively access rates could be analyzed in comparison to factors affecting the decision to access treatment and the need in the HealthChoices 0-20 year population for treatment. However, African-American and Caucasian access rates for age, gender, and child welfare system-involved subgroups could be compared. The role of insurance coverage in access rates was also analyzed; the type of HealthChoices eligibility provides some indication of treatment need and poverty status. The role of coverage length in access rates was also assessed.

Research questions measuring access for different groups:

- How did African-American and Caucasian access rates differ within age and gender groups?
- How did African-American and Caucasian access rates differ for children with a history of involvement with child welfare services?
- How did access rates differ for African-Americans and Caucasians within HealthChoices eligibility groups?

Some research has found that African-Americans disproportionately receive emergency care and treatment in psychiatric hospitals (SGR Supplement 64-65). This higher use can be related to findings that indicate African-Americans are also more likely to delay seeking treatment until their symptoms become more severe (SGR Supplement 28, 65). With available data, African-American and Caucasian access rates could be compared for specific services, and what services were first used, to evaluate if African-Americans were more likely to use more intensive or crisis services and fewer community-based services.

Research questions measuring access to specific services and point of entry for services:

- How did African-American and Caucasian access rates differ when individual behavioral health services were examined?
- Were there differences in how African-Americans and Caucasians started receiving behavioral health services under HealthChoices?

^{*} The Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) is the tool used by clinicians to diagnose individuals with mental disorders.

Effective treatment

Once African-Americans access behavioral health services, they are less likely than Caucasians to receive effective treatment for behavioral health problems (SGR Supplement 3). Effective treatment involves accurate diagnosis, receiving the appropriate type of service(s), and remaining in treatment for a sufficient length of time. African-Americans who do access specialty mental health care are more likely to leave treatment early (SGR Supplement 64). As noted above, African-Americans are more likely to receive emergency care or treatment in psychiatric hospitals. They are also more likely to be misdiagnosed in certain settings (SGR Supplement 66).

Thoroughly analyzing effective treatment requires analysis of symptoms, impairment, and accuracy of diagnosis compared to the quality, intensity and duration of services received. Because available data is based on paid claims for services (rather than clinical record reviews), information on symptoms, impairment, and quality of services delivered is not available. However, claims data permitted very valuable analysis. African-American and Caucasian rates of engagement, number of services used, and types of services used were compared. Comparisons also included dollars spent on treatment. Because different disorders require different types and intensities of treatment, service use data for different diagnoses was also compared.

Research questions measuring effective treatment:

- Were African-American children and youth more likely than Caucasians to have just one visit to a behavioral health provider?
- Were African-Americans more likely than Caucasians to use just one type of service during the year, rather than multiple types of services?
- Did African-Americans and Caucasians use different amounts of individual services?
- Were the total costs of services used by African-Americans different from Caucasians?
- Were African-Americans diagnosed with specific behavioral health disorders at similar rates to Caucasians?
- Within diagnostic groups, did African-Americans use different patterns of treatment from Caucasians?

Description of the Data

All individuals 0-20 years who were enrolled in the HealthChoices program for at least one month during 2002 were defined as *enrollees* and included in the dataset. Enrollees who used at least one unit of any behavioral health service (measured by paid claims) during 2002 were counted as *consumers*. Four categories of variables were used: demographic variables, HealthChoices eligibility variables, social service involvement variables, and service use variables. Both enrollees and consumers had data for the first three variable categories; only consumers had data for the service use variables. The variables, by category, are defined below.

Demographic Variables

- **Age:** 0-5 years, 6-12 years, 13-17 years, and 18-20 years.
- **Gender:** Male or female.
- **Race:** African-American or Caucasian. All other racial and ethnic groups (including Asians, Hispanics, and “Others”) represented less than 3% of the 2002 enrollee population. Findings are reported for African-Americans and Caucasians because of the very small size of these other groups, but all enrollees and consumers are included in the totals.

HealthChoices Eligibility Variables

• ***HealthChoices eligibility category:*** Individuals qualify for HealthChoices because they are eligible for Medicaid through one of seven broad categories of aid. Pennsylvania's Department of Public Welfare determines eligibility for these categories of aid through a complex set of criteria that takes into account the individual's income, assets, and disability status. For children, parental income and assets are usually considered in this process, with one important exception explained below. Nearly all children and youth qualify for HealthChoices through three categories of aid:

1. **Temporary Assistance to Needy Families (TANF):** This federal program provides cash assistance and Medicaid to families with dependent children who do not have the care or support of at least one parent, as a result of the parent's absence, incapacity, or unemployment (OMHSAS 3). Families qualify if their income and assets are below certain thresholds.
2. **Healthy Beginnings (HB):** This program provides Medicaid coverage for children and adolescents and women who are pregnant or in the postpartum period. The income and asset limits are higher for Healthy Beginnings than TANF (OMHSAS 3).
3. **Supplemental Security Income (SSI):** Disabled children whose family's income and assets below certain thresholds qualify for SSI. The disability can be a physical or mental condition (or a combination of conditions), and documentation of the child's history must show that the condition results in "marked and severe functional limitations" and is expected to last at least 12 months (Social Security Administration 3-5). In Pennsylvania, children who qualify for SSI automatically qualify for Medicaid.

Pennsylvania law includes a "loophole" where children's eligibility status for Medicaid can be based on disability *and family income is excluded from the eligibility decision* (Pennsylvania Community Providers Association 1). In our report, enrollees eligible through SSI are often subdivided into "enrollees eligible through the loophole" and "enrollees eligible for SSI."

Some individuals may change their eligibility category over time, if their income changes or they become disabled by their condition, for example. For individuals that changed their eligibility category during 2002, we used their most recent eligibility category during 2002. Each enrollee therefore had one eligibility category in the dataset.

• ***HealthChoices eligibility length:***

The number of months during 2002 that each enrollee was eligible for HealthChoices was included. Enrollees who had less than one month of eligibility were excluded.

Social Service Variables

This report includes three social service variables. For each variable, enrollees either *had a history of involvement with* or *no history of involvement with* the individual social service. Enrollees could have been involved with none of the social services, or one, two or all of the social services. Enrollees were involved with one of the social services if they were on the roster received from the Office of Children, Youth and Families or the Juvenile Probation Office at any time during the HealthChoices program (not necessarily during 2002). The data does not include any indication of the level of involvement with the service.

• ***Office of Children, Youth and Families (CYF):*** The mission of CYF is to protect children from abuse and neglect. In Allegheny County, CYF works with children, families, the courts, and service providers to protect children and preserve families. Families become involved with CYF when CYF receives a report of suspected abuse or neglect.

- **Substitute care:** Substitute care placements include CYF placements outside the child's home as well as placements at residential treatment facilities and residential drug and alcohol facilities. Because the substitute care category includes some treatment facilities, enrollees could be in substitute care without being involved with CYF. However, 87.5% of children in substitute care and enrolled in HealthChoices during 2002 were also involved with CYF at some point in their history.
- **Juvenile Probation Office (JPO):** County juvenile probation officers in Pennsylvania are the juvenile court's "foot soldiers." These officers are the primary contact points for youth involved with the courts. JPO's responsibilities include "initial screening, predisposition investigation, probation supervision, and "aftercare" or post-commitment supervision" (Pennsylvania Juvenile Court Judges' Commission 23).

Variables Derived from Service Use Data (available for consumers only)

- **Accessed Service:** This variable, either a Yes or a No for each enrollee, indicates whether or not the enrollee used at least one unit of a behavioral health service during 2002.
- **Diagnosis:** Providers must include a primary diagnosis on each claim submitted for payment. Since about 30% of consumers received multiple diagnoses within 2002, the primary diagnosis assigned was based on the diagnosis received most often. Diagnoses were combined into thirteen diagnostic groups. See the Technical Appendix for more details on this methodology.
- **Service use:** For each consumer, the numbers of units used for each behavioral health service during 2002 were totaled. Therefore, analysis of service use is based on unit totals used during the year. The dataset did not include dates of service, so the order in which services were used for consumers who used multiple services within the year was not analyzed.
The amount of time represented by one unit varies by service type. For example, one inpatient mental health unit is equivalent to one day, while one unit of case management is equivalent to fifteen minutes. Please see the Service Description Appendix for descriptions of services.
- **Cost.** Unit costs for each service were determined by dividing total approved, paid claims in 2002 by the total number of units delivered. Units for each service for each consumer were then multiplied by the unit cost to get the cost for each service; all costs were added to create a total cost for each consumer. Total mean and median costs per consumer for services were computed on these cost variables.

What is the difference between the mean and the median?

Throughout the report we present findings that describe different groups in the population. The *mean* (or average) and the *median* are measures most commonly used to describe a group's characteristics.

The *mean* is the result of adding up all the observations, then dividing by the number of observations.

The *median* is the middle value in the group. Half of the values in the group fall above the median, and half the values fall below the median.

The decision to use the mean or median is based on the distribution, or spread, of the data. If the data is compact (meaning there are not extremely high or low values in comparison to most values), the mean accurately describes the group.

If the data is skewed (meaning there are a few extremely high or low values, in comparison to most values), the mean will also be skewed. In these instances, the median is a more reliable measure.

When we examined service use and cost data, the distributions were generally highly skewed; a few consumers within a group often had very high usage. Therefore, we relied on the medians when making comparisons and drawing conclusions. Often, we provide the means and the range of values observed as additional information.

Structure of the Report

Our findings follow the organization of the research questions:

- Findings related to access to services, including comparisons in access for different groups, and for different services.
- Findings related to effective treatment, focusing on comparisons between African-Americans and Caucasians for engagement, number of services used, and types of services used.
- Findings related to effective treatment for African-Americans and Caucasians, focusing on comparisons of amounts of services, costs and diagnoses.

Detailed comparisons between African-Americans and Caucasians with the same diagnoses are presented in the Diagnostic Profiles Appendix following the report.

Findings

Comparison of African-American and Caucasian HealthChoices Enrollees

Understanding differences between African-American and Caucasian enrollees provides an essential context for our research questions. Age, gender, history of involvement with social services, and HealthChoices eligibility status are all important factors associated with whether or not individuals have a mental disorder, and whether or not they choose to seek treatment. Table 1 outlines the similarities and differences between African-American and Caucasian enrollees.

Table 1.

2002 HealthChoices Enrollees, Ages 0-20 years				
		African-Americans	Caucasians	Total*
Age	Total Enrollees	39,929	37,641	79,919
	0-5	31.6%	34.5%	33.4%
	6-12	36.6%	32.7%	34.5%
	13-17	21.4%	20.4%	20.7%
	18-20	10.5%	12.4%	11.3%
Gender	Male	49.6%	51.0%	50.4%
	Female	50.4%	49.0%	49.6%
Social service involvement history	CYF	21.8%	12.9%	17.3%
	JPO	5.6%	3.8%	4.6%
	Substitute Care	8.6%	4.4%	6.5%
HealthChoices eligibility length	Full-year eligibility	66.0%	55.2%	60.5%
	average months enrolled if not eligible entire year	6.9	6.4	6.6
HealthChoices eligibility category	Healthy Beginnings	24.2%	44.7%	34.3%
	SSI	8.1%	13.8%	11.0%
	SSI Loophole	0.3%	6.2%	3.2%
	SSI Non-Loophole	7.8%	7.6%	7.7%
	TANF	67.3%	40.7%	54.1%

* Totals include enrollees of all races. Because of the small number of enrollees in categories other than African-American and Caucasian, findings are not reported.

Children and adolescents enrolled in HealthChoices during 2002 shared similar age and gender characteristics, regardless of their race. The proportions of males and females were nearly equal. About 58% of African-American enrollees and 53% of Caucasian enrollees were of school-age.

Research indicates that African-Americans are over-represented in child welfare services; they are more likely to be referred to services, and more likely to be placed in substitute care (Snowden et al. 265). African-Americans are also over-represented in the juvenile justice system (Hurst & Zawacki 1). These findings hold true in Allegheny County; a higher proportion of African-Americans than Caucasians had histories of involvement with social services.

Clear differences in *how* enrollees were eligible for HealthChoices occurred by race:

- 24% of African-Americans, compared to 45% of Caucasians, were enrolled through Healthy Beginnings
- 67% of African-Americans, compared to 40% of Caucasians, were enrolled through TANF
- 8% of African-Americans, compared to 14% of Caucasians, were enrolled through SSI
- Significantly more Caucasians (6.2%) than African-Americans (0.3%) were eligible for HealthChoices through the “loophole.” Therefore, the “loophole” factor is an important consideration for Caucasians, but applies to a very small number of African-American enrollees.*

The racial differences between TANF and Healthy Beginnings can be attributed to income and asset differences. African-Americans fall below the poverty line in greater proportions than Caucasians (Bangs et al. 31), and are therefore more likely to be eligible for TANF, which has a lower income threshold, than Caucasians.

Some differences in *how long* enrollees were eligible for HealthChoices occurred by race:

- A higher proportion of African-Americans than Caucasians were enrolled for all of 2002 (66% vs. 55%).
- For enrollees eligible for less than one year, both racial groups were eligible for approximately the same amount of time (on average, 6.9 months for African-Americans, and 6.4 months for Caucasians).

How did African-American and Caucasian access rates differ within age and gender groups?

Age and gender are associated with the prevalence rates of behavioral health disorders. For example, boys are more likely than girls to develop autism; adolescents generally do not develop substance abuse disorders until their mid to late teen years. Overall prevalence rates of mental health disorders *are not* expected to vary by race (SGR Supplement 58) because of genetic differences.

Because prevalence rates vary by age and gender, we expected that rates of service access (penetration rates) would also vary by age and gender. Any differences by race require further investigation as they indicate possible disparities. Table 2 shows penetration rates by age, gender and race.

How are access rates calculated?

Access rates, or penetration rates, are used to measure access to services. Access rates are calculated by dividing the number of consumers who *use* behavioral health services by the average number of enrollees *eligible to use* services.

Rates are expressed as a number of consumers per 1,000 enrollees. Access rates increase when a larger proportion of eligible members access services. If the number of consumers increases proportionally with an increase in enrollment, the access rate will not change.

* See page 7 for definitions of these categories.

Table 2

Table 2

Access Rates by Age, Gender and Race for 2002 HealthChoices Enrollees				
		# Consumers	# Enrollees	# consumers/1000 enrollees
0-5 years	AA Females	47	6,134	7.66
	AA Males	95	6,467	14.69
	C Females	132	6,270	21.05
	C Males	295	6,729	43.84
6-12 years	AA Females	526	7,056	74.55
	AA Males	1,206	7,550	159.74
	C Females	689	5,724	120.37
	C Males	1,448	6,568	220.46
13-17 years	AA Females	625	4,209	148.49
	AA Males	849	4,339	195.67
	C Females	818	3,651	224.05
	C Males	1,082	4,039	267.89
18-20 years	AA Females	189	2,728	69.28
	AA Males	148	1,446	102.35
	C Females	435	2,813	154.64
	C Males	377	1,847	204.11
Total		9,156	79,919	114.57

There are a number of observations on access rates:

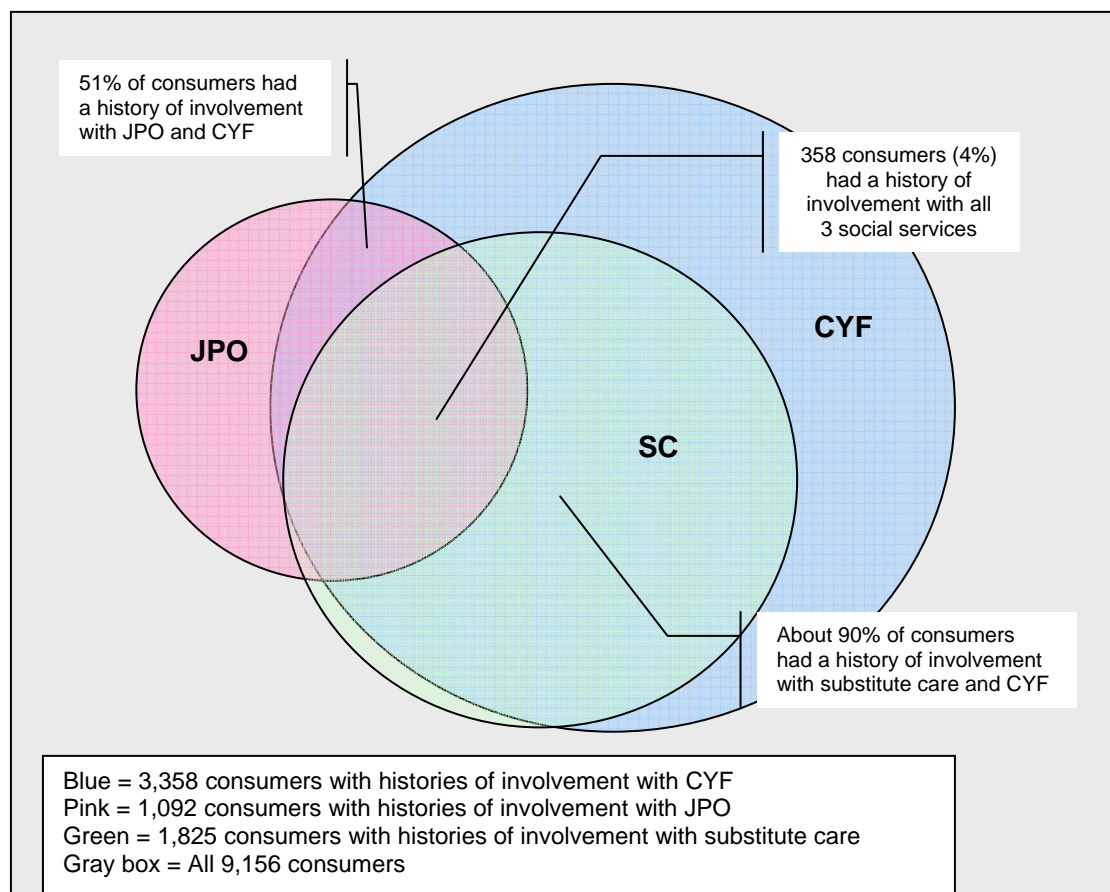
- The proportion of children 0-5 years who accessed services is smaller than all other age groups.
- The highest penetration rates occurred in the 13-17 year age group.
- Caucasian males accessed services at the highest rates in all age groups.
- The largest gap between African-American and Caucasian rates occurred in the 0-5 year age range; proportionally one third as many African-Americans accessed services as Caucasians.
- A large gap was also observed in the 18-20 year age range; proportionally about half as many African-Americans accessed services as Caucasians.
- The gaps between these two racial groups were smaller for children and adolescents ages 6-17 years, but were still quite large.

The relatively smaller gap between African-American and Caucasian access rates for 6-17 year olds suggests that schools may play an important role in successfully referring children and adolescents into behavioral health treatment.

How did African-American and Caucasian access rates differ for children with histories of involvement with child welfare services?

Research indicates that approximately 42% of children and adolescents in child welfare programs meet diagnostic criteria for a mental disorder (SGR Supplement 62), a considerably higher rate than the general population. Because children become involved with child welfare programs when abuse or neglect is an issue, children involved with child welfare programs experience higher rates of mental illness (Snowden 265). Similarly, children and adolescents involved with the juvenile justice system also have very high rates of mental disorders when compared with the general population.

We expect that HealthChoices enrollees with a history of involvement with child welfare (Office of Children, Youth and Families (CYF), substitute care, and/or the juvenile justice system (JPO) would therefore access behavioral health services at higher rates. The diagram below shows the history of involvement of consumers with the three social services. The gray box represents all consumers; each circle represents one of the three systems (the blue circle represents CYF consumers, etc.). The areas where the circles overlap indicate the number of consumers who have a history of involvement with multiple systems.



Enrollees and consumers could have been involved with none, one, two or all three of the social services in the past. As expected, enrollees with a history of involvement with at least one social service used behavioral health services at greater rates than the overall enrollee population. About 44% of all consumers had past involvement with CYF, JPO, substitute care, or a combination of the three. Children with histories of CYF and JPO involvement accessed behavioral health services at twice the rate of the overall population, and children with histories of involvement in substitute care accessed behavioral health services at three times the rate of the overall population.

Table 3 shows the access rates for children by race and history of involvement with each of the three social services. The same pattern was observed regardless of which social service the children were involved with: Caucasian males accessed services at the highest rates, followed by Caucasian females, African-American males, then African-American females.

Table 3

Table 3

2002 Access Rates for HealthChoices Enrollees with Histories of Involvement with CYF, Substitute Care, or JPO				
		# Consumers	# Enrollees	# Consumers per 1,000 Enrollees
CYF	AA Female	778	4,415	176.2
	AA Male	1,106	4,300	257.2
	C Female	674	2,401	280.7
	C Male	843	2,473	340.9
	Total	3,401	13,589	250.3
Substitute Care	AA Female	442	1,505	293.7
	AA Male	641	1,909	335.8
	C Female	315	762	413.4
	C Male	403	898	448.8
	Total	1,801	5,074	354.9
JPO	AA Female	189	770	245.5
	AA Male	383	1,476	259.5
	C Female	150	439	341.7
	C Male	357	977	365.4
	Total	1,079	3,662	294.6

Because more African-Americans had been involved with social services, and youth involved with these services are high-need populations, these results are of particular concern. We would expect that the intake and assessment processes at CYF and JPO would result in similar proportions of African-Americans and Caucasians being identified as needing behavioral health treatment.

Results of AHCI's 2003 report were shared with CYF and JPO; representatives were very interested in seeing additional analyses and further discussions. The behavioral health system should continue dialogs with these services to find out whether disparities may begin during the assessment process, or in the treatment-seeking process, or if children are receiving services not paid through HealthChoices. Further analyses of consumers with histories of involvement with social services will be presented in a supplementary report.

How did access rates differ for African-Americans and Caucasians within HealthChoices eligibility groups?

Those living in poverty have worse overall health; research has also shown that people with lower levels of income, education and occupation (socioeconomic status) are more likely to have a mental disorder and have higher levels of psychological distress (SGR Supplement 39). HealthChoices eligibility categories provide some indication of poverty status and treatment need. Table 4 compares African-American and Caucasian access rates for each of the HealthChoices eligibility categories.

Table 4.

Penetration Rates by Race and Eligibility Category				
Eligibility Category		# Consumers	# Enrollees	Access Rate
Healthy Beginnings	African-American	394	9,643	40.86
	Caucasian	1,115	16,829	66.25
SSI Loophole	African-American	73	127	574.80
	Caucasian	930	2,329	399.31
SSI Non-Loophole	African-American	1,052	3,096	339.79
	Caucasian	1,183	2,849	415.23
TANF	African-American	2,138	26,872	79.56
	Caucasian	1,960	15,332	127.84

The data in Table 4 shows that access rates were higher for enrollees eligible through TANF than enrollees eligible through Healthy Beginnings. Enrollees eligible through TANF have lower family incomes than enrollees eligible through Healthy Beginnings. Also, more enrollees eligible through TANF than through Healthy Beginnings are in the older age categories. As discussed earlier, people with lower socioeconomic status are more likely to have a mental disorder. Older children and adolescents are more likely to have a mental disorder than very young children. The combination of income and age could account for the higher access rates for TANF enrollees as compared to Healthy Beginnings enrollees. *African-Americans eligible through both these categories still accessed services at about 60% of the Caucasian rates.*

The data in Table 4 shows that access rates were higher for enrollees eligible through SSI than TANF or Healthy Beginnings. Physical illness or disability is a risk factor for mental disorders (SGR Supplement 30). Enrollees eligible through SSI have a documented mental and/or physical disability. Because SSI enrollees have a disability, higher behavioral health service access rates for SSI enrollees are expected. For those eligible for SSI because of their disability and low household income (non-loophole status), about 20% more Caucasians than African-Americans accessed behavioral health services.

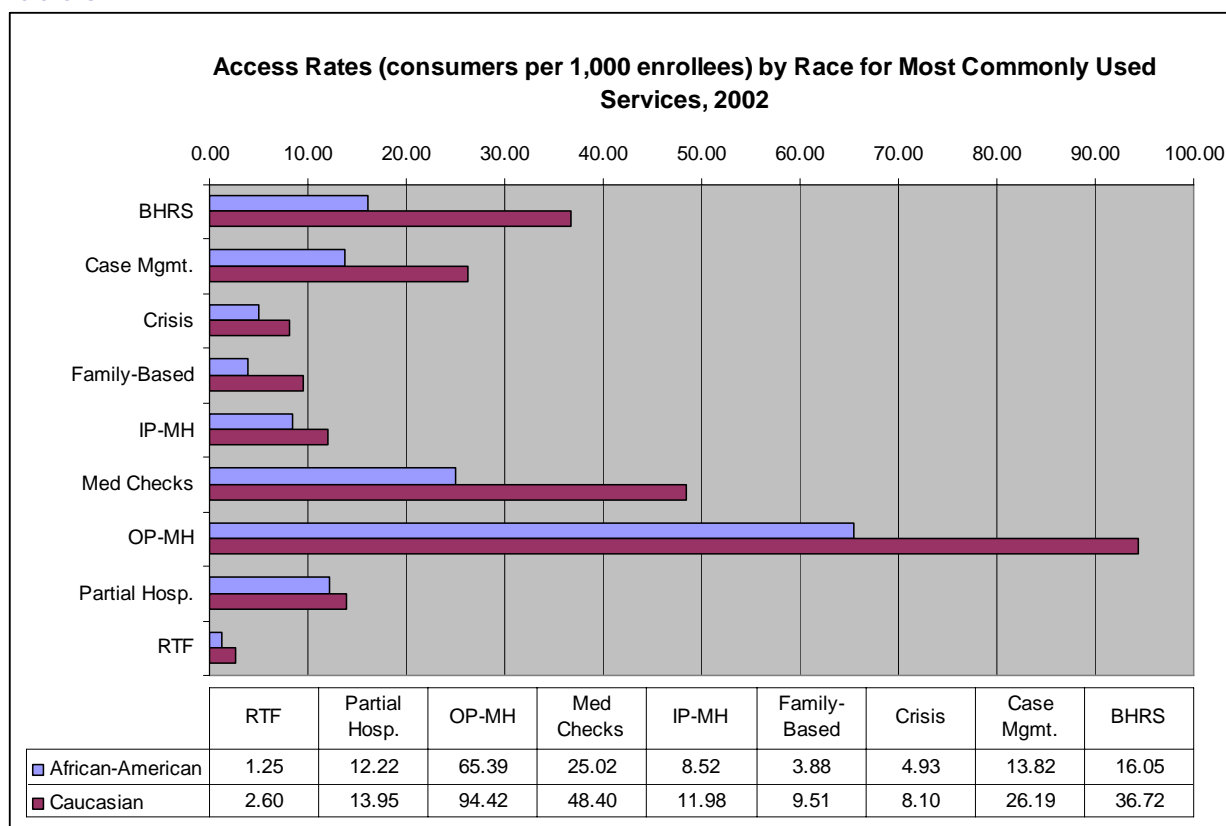
When disability is the only consideration for eligibility ("loophole" status), *African-American access rates (574.8 consumers per 1,000 enrollees) exceeded Caucasian access rates (399.3 consumers per 1,000 enrollees).* This could be a result of the *type of disability*; perhaps a larger proportion of African-Americans received SSI through the loophole because of a mental disorder. Or, perhaps this group of African-Americans, who have a higher socioeconomic status, face fewer barriers in accessing care (mistrust of services and stigma, for example). Because this group of African-Americans is much smaller than the other groups, results should be interpreted with caution.

Overall, the largest gaps in African-American and Caucasian access rates occurred for enrollees eligible first and foremost because they were poor. The gap between African-Americans and Caucasians was smaller, but still persisted, for those who had a disability and limited income.

How did African-American and Caucasian access rates differ when individual behavioral health services were examined?

Within each age and gender group, African-Americans accessed services at lower rates than Caucasians (Table 2). Table 5 shows the penetration rates for nine selected service categories by race. Service descriptions are in the Service Description Appendix. These services were the most frequently used services and accounted for about 97% of claims in 2002 for 0-20 year olds. The following analysis compares access rates for specific services, to see if African-Americans were more likely to use more intensive or crisis services and fewer community-based services.

Table 5



Several differences emerged when access rates were compared by race:

- Access rates for African-Americans were less than Caucasians for all services.
- The largest proportional gaps occurred in family-based services, BHRS, and RTF; African-American rates were less than half the Caucasian rates.
- When the population diagnosed with childhood psychosis* was excluded from the BHRS access rates, the gap between the African-American and Caucasian rates was reduced. However, the African-American rate was still only 60% of the Caucasian rate.

* Childhood psychosis diagnoses include autistic disorder, Asperger's syndrome, and pervasive development disorder. This diagnostic group was significantly different from the other diagnostic groups; the population was predominantly Caucasian, male, younger, and was eligible through the HealthChoices loophole in higher proportions. Because effective treatment for many consumers with autism requires a higher intensity of services (usually BHRS), we note in our findings where this diagnostic group may be affecting the overall results. Service use for consumers with these diagnoses is explored in more detail in the Diagnostic Profiles.

- Medication checks and case management services, which are typically used in conjunction with other services, also demonstrated large gaps in penetration rates between African-Americans and Caucasians. African-American rates were about half the Caucasian rates for these two services.
- Access rates for these two racial groups showed the greatest similarity for partial hospitalization services, followed by inpatient mental health and outpatient mental health services.

The access rates shown in Table 5 were also calculated for the individual age groups; for the two older age groups (13-20 years), drug and alcohol services were also analyzed. Broadly, the same patterns from Table 5 were observed when each age group was examined; many of the rates were calculated based on a small number of consumers so interpretation was more difficult.

- In the youngest age group (0-5 years), gaps between African-American and Caucasian penetration rates for BHRS and outpatient mental health were more pronounced than when all age groups are combined.
- In the school-age groups (6-17 years), differences in penetration rates for African-Americans and Caucasians were the smallest for partial hospitalization, outpatient mental health, and inpatient mental health services.
- For outpatient drug and alcohol services, penetration rates for 13-17 year old African-Americans and Caucasians were nearly identical, but proportionally fewer African-Americans than Caucasians in the oldest age group (18-20 years) accessed this service.

The relatively larger differences in African-American and Caucasian access rates for BHRS and family-based services suggest that African-Americans were less likely to use home-based services. Access rates for more traditional services (outpatient and inpatient mental health) were more similar by race. African-Americans did not use inpatient mental health services, crisis services or RTF services at higher rates than Caucasians. Access rates for partial hospitalization services for African-Americans and Caucasians were the most similar. Because 80% or more of partial hospitalization services are school-based programs, and placement in these school-based programs is usually initiated by the school district, the role of the educational system in children's access to behavioral health services needs to be further examined. Overall, the data showed that African-Americans were less likely to receive any service, particularly some home-based services. The data did not indicate that African-Americans were more likely to need (or at least use) crisis or inpatient services.

Were there differences in how African-Americans and Caucasians started receiving behavioral health services under HealthChoices?

Some research suggests that minorities may wait to seek mental health treatment until their symptoms are more severe (SGR Supplement 65). Therefore, we might expect to see that African-Americans were more likely to use a more intensive service as their first behavioral health service. To determine if there were differences in how African-American and Caucasian children and youth entered services, each 2002 consumer's record was searched to determine what service they received first under HealthChoices (services could have been received as early as 1999). See Table 6.

While this does not precisely capture how the populations sought treatment, it is the only available method to answer this treatment seeking question. For example, consumers may have sought treatment through their primary care physician for several years to treat depression (data for this treatment is not available), while the first service ever received that was paid for by HealthChoices may have been an inpatient mental health stay.

Table 6

First Behavioral Health Service Used (under HealthChoices) for 2002 Consumers 0-20 Years						
		AA F	AA M	C F	C M	Total
BHRS	Count	76	194	207	637	1147
	% of race/gender total	5%	8%	10%	20%	13%
Case Mgmt.	Count	35	80	74	168	364
	% of race/gender total	3%	3%	4%	5%	4%
Crisis	Count	40	45	46	48	182
	% of race/gender total	3%	2%	2%	1%	2%
D&A services	Count	32	57	69	105	270
	% of race/gender total	2%	2%	3%	3%	3%
Fam-Bas	Count	11	13	41	67	134
	% of race/gender total	1%	1%	2%	2%	1%
IP-MH	Count	108	109	112	88	426
	% of race/gender total	8%	5%	5%	3%	5%
Med Check	Count	34	146	96	229	513
	% of race/gender total	2%	6%	5%	7%	6%
OP-MH	Count	920	1416	1308	1659	5414
	% of race/gender total	66%	62%	63%	52%	59%
PHP-MH	Count	44	153	47	123	372
	% of race/gender total	3%	7%	2%	4%	4%
RTF	Count	12	14	13	33	74
	% of race/gender total	1%	1%	1%	1%	1%
Total	Count	1,387	2,298	2,074	3,202	9,156

Observations:

- Outpatient mental health services were the most commonly used first service by all consumers.
- Caucasian males were much more likely to use BHRS as their first service (20% of all male, Caucasian consumers). Even when the childhood psychosis population is excluded, Caucasian males still accessed this service first more often (12%).
- A slightly higher proportion of African-American females (8%) than the other groups (3-5%) used inpatient stays as their first service. A slightly smaller proportion of African-American females (2%) used medication checks as their first service.
- African-American males were more likely to use partial hospitalizations first (7%) than the other groups (2-4%).

While small, the number of consumers in all race and gender groups with a medication check as their first service is surprising. We would expect that all consumers would have received a psychiatric evaluation (which would have been counted in the outpatient, inpatient, or partial services) before getting medication checks. Incorrect service dates on claims may account for some of these instances; also, some individuals may have become eligible for HealthChoices *after* their psychiatric evaluation but *before* their medication check.

Were African-American children and youth more likely than Caucasians to have just one visit to a behavioral health provider?

Because African-Americans who do access mental health care are more likely to leave treatment early (SGR Supplement 64), we compared the proportions of African-American and Caucasian consumers who “touched” the behavioral health system but did not continue in treatment. Table 7 shows the number and percentage of consumers who *used just one unit of service during 2002*.

Table 7

Number of Consumers with One Unit of Service during 2002, by Race			
	Total # consumers with one unit of service in 2002	Total # consumers in 2002	% of consumers with one unit of service
African-Americans	351	3685	10%
Caucasians	404	5276	8%

- 10% of African-American consumers had just one unit of service. 83% of these consumers used outpatient mental health services; 8% used medication checks; 7% used outpatient drug and alcohol services.
- 8% of Caucasians had just one unit of service. 80% of these consumers used outpatient mental health services; 16% used medication checks; 3% used outpatient drug and alcohol services.

So, African-Americans were not substantially more likely to access the behavioral health system once and not return. Most of these consumers with “one touch” accessed outpatient services. Often, the first visit involves the intake/assessment process, so no therapy is delivered. While we cannot measure how many of these consumers may have actually needed treatment, the behavioral system should focus on engagement and retention strategies for people of all races who enter the system through outpatient mental health services.

Were African-Americans more likely than Caucasians to use just one type of service during the year, rather than multiple types of services?

Depending on diagnosis, symptom severity and consumer choice, consumers may need or prefer to use multiple types of services within a year. Some services can be used at the same time (for example, case management and partial hospitalization, outpatient mental health and medication checks), while others are used one after the other (inpatient mental health services, followed by partial hospitalization services as the step-down level of care). Examining the number of services used in 2002 by race provides additional information on the type of treatment received. See Table 8.

Table 8

Number of Service Types Used during 2002, by Race and Gender									
	1 Service		2 Services		3 Services		4 or More Services		Total
	Count	% of Cons.	Count	% of Cons.	Count	% of Cons.	Count	% of Cons.	Count
AA F	816	59%	320	23%	137	10%	114	8%	1,387
AA M	1,209	53%	606	26%	249	11%	234	10%	2,298
AA Total	2,025	55%	926	25%	386	10%	348	9%	3,685
C F	1,098	53%	513	25%	255	12%	208	10%	2,074
C M	1,502	47%	892	28%	400	12%	408	13%	3,202
C Total	2,600	49%	1,405	27%	655	12%	616	12%	5,276
Total	4,724	52%	2,383	26%	1,063	12%	986	11%	9,156

Table 8 shows that African-Americans were somewhat more likely to access just one service type during 2002; Caucasians used multiple services in higher proportions than African-Americans.

For consumers *who used just one service type within the year*, similar patterns discussed in Table 5 were observed:

- The great majority of these consumers used outpatient mental health services.
- A much larger proportion of Caucasian males (23%) than African-American males (8%) used BHRS; this gap disappears when consumers with childhood psychoses diagnoses are excluded.

Did African-Americans and Caucasians use different amounts of individual services?

Once African-Americans access behavioral health services, they are less likely than Caucasians to receive effective treatment for behavioral health problems (SGR Supplement 3). African-Americans who do access mental health care are more likely to leave treatment early (SGR Supplement 64). As discussed earlier, claims data does not provide an opportunity to analyze the effectiveness of treatment. However, comparisons of the amounts of specific services used by African-Americans and Caucasians can show different treatment patterns. Table 9 compares the mean and median number of units used for each service by race. Because one unit equals different amounts of time for different services, comparisons between services cannot be made.

Table 9

Mean and Median Number of Units, by Service and Race, for 2002 Consumers 0-20 Years									
	African-Americans			Caucasians			Total		
	# Cons.	Mean	Median	# Cons.	Mean	Median	# Cons.	Mean	Median
BHRS	641	620	378	1382	891	615	2077	810	524
Case Mgmt.	552	201	155	986	207	172	1572	204	163
Crisis	197	14	10	305	19	11	514	18	11
Family-Based	155	320	263	358	352	292	521	345	281
IP-MH	340	16	9	450	14	8	811	15	9
Med Checks	994	4	3	1814	4	3	2873	4	3
OP-MH	2599	14	6	3536	13	6	6261	13	6
Partial Hosp.	488	469	360	525	381	202	1028	422	278
RTF	50	162	150	98	172	163	152	169	162

Observations are based on the median values, because the means are affected by a few consumers using a very large amount of services:

See page 7 for definitions of the mean and median.

- Caucasians used significantly more BHRS units than African-Americans. The impact of diagnosis (specifically childhood psychosis) that may affect utilization for this level of care is explored in more depth in the diagnostic profiles section.
- The median numbers of units used by African-Americans for several other services were slightly lower than median values for Caucasians, including case management, family-based services, and RTF. For each of these services, African-Americans used about 10% fewer units than Caucasians.
- Caucasians and African-Americans used similar amounts of crisis services, inpatient mental health services, medication checks, and outpatient mental health services.
- For consumers who used outpatient services, similar proportions in each racial group used two or fewer units (one hour or less of treatment). 31% of African-Americans and 29% of Caucasians used two or fewer units.
- Partial hospitalization services were the only services where the median usage for African-Americans was significantly larger than the Caucasian median usage.

This analysis suggests that, in addition to accessing BHRS, case management, family-based services, and RTF in lower proportions, African-Americans used fewer units of these services when they did use them. On the other hand, African-Americans used more units of partial hospitalization services.

It is difficult to assess whether or not these different amounts of treatment result in less effective treatment. The medians represent the *middle value*; within both racial groups, use of services such as case management, family-based, and BHRS varied widely. Furthermore, higher use of RTF and partial hospitalization may be the result of other systemic barriers. For example, consumers may stay for longer periods in RTF if the program has difficulty with setting up post-discharge services. Consumers may use partial hospitalization services for longer periods if their home school district resists accepting them back. Input from families, providers and other stakeholders including the educational system will be helpful in interpreting these differences.

Were the total costs of services different for African-Americans and Caucasians?

The importance of the differences in means and medians in Table 9 is difficult to assess. Using total costs of services as a summary of the various services used provides an additional analysis of differences by race. Table 10 shows the mean and median costs for all consumers, and then for all consumers except those with a diagnosis of childhood psychosis. Because this diagnostic group had very high costs, and the majority of consumers in this group were Caucasian males, excluding costs for this group provides a more balanced description of costs used (see the footnote on page 16 for additional explanation).

Table 10

Cost Data for Consumers by Race and Gender, 2002						
# Consumers, Mean and Median Costs for all Consumers, by Race and Gender				# Consumers, Mean and Median Costs, by Race and Gender (Childhood Psychosis diagnosis excluded)		
Race/Gender	# Cons.	Mean	Median	# Cons.	Mean	Median
AA F	1,387	\$3,929	\$546	1,370	\$3,749	\$540
AA M	2,298	\$5,679	\$870	2,219	\$5,369	\$806
C F	2,074	\$5,396	\$639	1,970	\$4,831	\$575
C M	3,202	\$8,326	\$1,560	2,711	\$6,551	\$936
Total	9,156	\$6,334	\$885	8,436	\$5,389	\$720

Observations are based on the median values, because the means are affected by a few consumers using a very costly combination of services:

- African-Americans' median cost was 70% of Caucasians' median cost. A larger gap was observed between genders than races. Females' median cost was 50% of males' median costs.
- Caucasian males had the highest total cost for services (median value \$1,560).
- African-American males used about 56% of the resources that Caucasian males used.
- African-American females used about 85% of the resources that Caucasian females used.
- When the consumers with childhood psychoses were excluded, the differences in median costs within the race and gender groups were much smaller. For example, African-American males used about 85% of the resources that Caucasian males used.

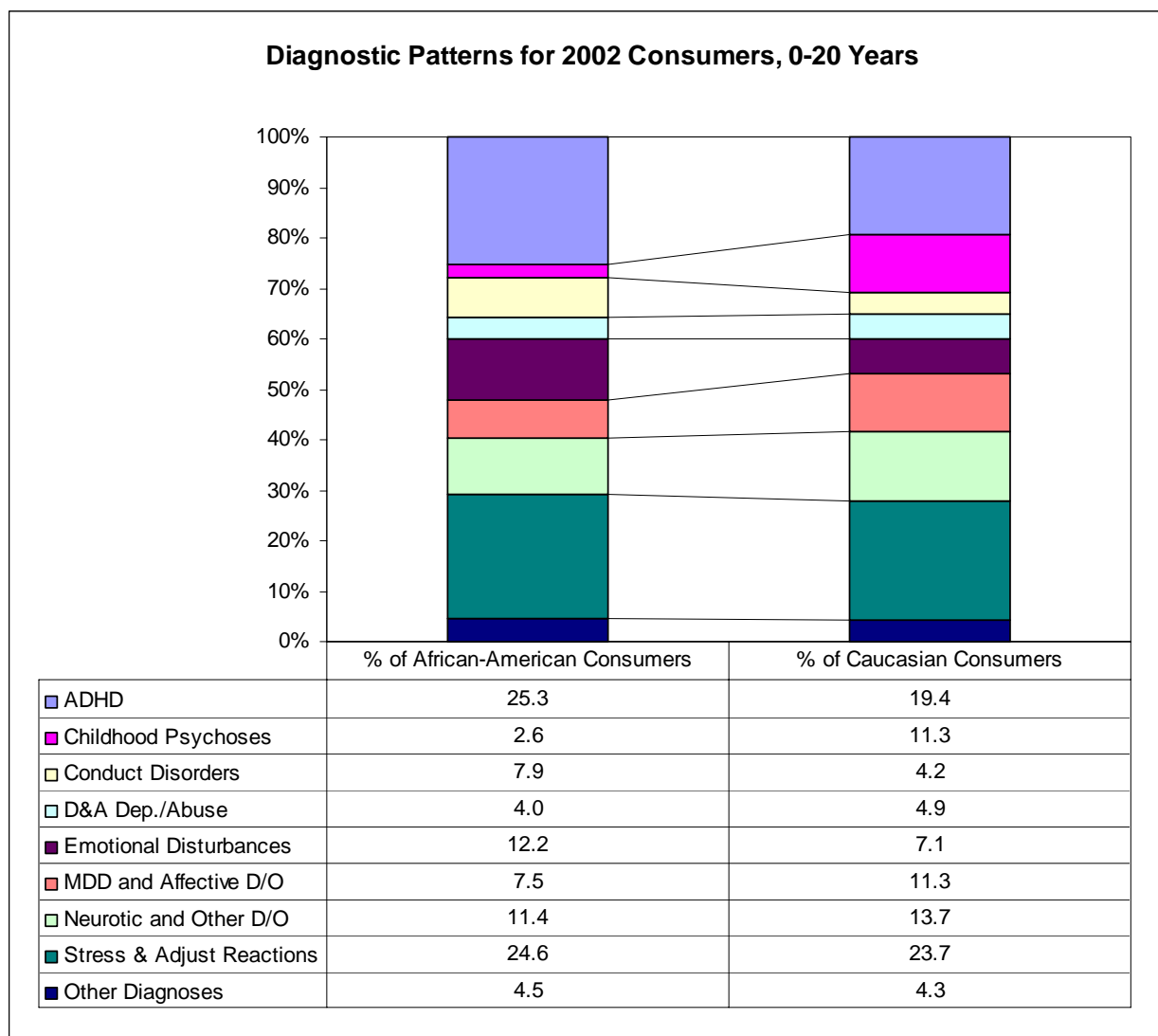
Were African-Americans diagnosed with specific behavioral health disorders at similar rates as Caucasians?

Effective treatment relies on accurate diagnosis. Different studies have found that African-Americans are more often misdiagnosed. Specifically, African-Americans may be less likely to be accurately diagnosed with depression by their primary care physicians or in an emergency room setting than Caucasians (SGR Supplement 66). Research has also shown that African-Americans have been more likely to be over-diagnosed with schizophrenia, and under-diagnosed with bipolar disorder and possibly anxiety (SGR Supplement 32). Anecdotally, AHCI has heard stakeholder concerns that African-American youth may be under-diagnosed with depression and over-diagnosed with oppositional defiant disorder or conduct disorder.

The first column in Chart 11 represents all African-American consumers, and the second column represents all Caucasian consumers by their diagnosis. Each column adds up to 100%. For example, the top section of each bar, light purple, represents the percentage of African-Americans (25.3%) and Caucasians (19.4%) diagnosed with ADHD.

Table 11 shows the diagnostic patterns of the 2002 consumer population by race. Stress and adjustment reaction disorders and ADHD were the most commonly received diagnoses. Because the age and gender distributions of African-American and Caucasian enrollees were so similar (Table 1), the diagnostic patterns by race were expected to be very similar. Each diagnosis is explored more fully in the Diagnostic Profiles section.

Table 11



Overall, the patterns were very similar by race. There were some differences in the diagnostic profiles of the two primary racial groups:

- A larger proportion of African-Americans had a diagnosis of ADHD (25.3% vs. 19.4% of Caucasians), conduct disorder (7.9% vs. 4.2% of Caucasians), or emotional disturbance diagnosis (12.2% vs. 7.1% of Caucasians).
- A larger proportion of Caucasians had diagnoses of childhood psychosis (11.3% vs. 2.6% of African-Americans), major depression and affective disorders (11.3% vs. 7.5% of African-Americans) or neurotic and other depressive disorders (13.7% vs. 11.4% of African-Americans).
- The two racial groups had similar proportions of consumers with diagnoses of drug and alcohol dependence/abuse and stress and adjustment reactions.

Whether or not these differences illustrate inaccurate diagnoses is far from clear. First, relying on claims data introduces some inaccuracy in the data (see the Technical Appendix for more detail on this variable). Second, while research has not found racial differences in the overall rate of mental disorders in children

and adolescents, conflicting results have been published for some symptoms and disorders (some finding differences between races, some did not) (SGR 58-59).

Also, the HealthChoices population is not representative of the general population. Because HealthChoices enrollees have higher rates of poverty and disability status, the HealthChoices population will have higher prevalence rates of mental disorders than the general population. As suggested by their eligibility categories (Table 1), Caucasian and African-American enrollees have different levels of poverty and disability. Because of these differences, it cannot be assumed that the prevalence rates or diagnostic profiles for the two races should be equivalent.

Despite these challenges, two differences noted above bear further investigation and discussion with stakeholders:

1. The comparative low rate of African-Americans diagnosed with childhood psychoses (autism) should be further assessed and discussed. Anecdotally, AHCI has heard concerns that African-American children with autism may be misdiagnosed with ADHD. Proportionally, more African-Americans during 2002 were diagnosed with ADHD.
2. About 20% of African-Americans, compared to 11% of Caucasians, had a conduct disorder or emotional disturbance disorder diagnosis. On the other hand, 18.9% of African-Americans, compared to 25% of Caucasians, had a major depression/affective psychoses or neurotic/other depressive disorder diagnosis. This suggests that African-Americans were more likely to be diagnosed with a behavior disorder, and less likely to be diagnosed with a mood disorder. Because the diagnostic process relies heavily on verbal communication, differences between the clinicians' and consumers' cultural backgrounds can result in misunderstanding and misdiagnosis, and unintentional clinician bias.

Differences in services used within these diagnostic groups were explored further. The Diagnostic Profiles Appendix at the end of the report includes the detailed analyses for each of these diagnostic categories. Key results include:

- For consumers diagnosed with *ADHD*, age and gender profiles were similar and eligibility lengths were comparable. Both racial groups primarily used outpatient mental health services as a first service. Overall, a larger proportion of Caucasians than African-Americans used family-based services, BHRS, case management services and medication checks. African-Americans were more likely to use partial hospitalization services. Median costs for this diagnostic group were consistent with the predominant trend observed across groups: Caucasians had higher costs than African-Americans, while males had higher costs than females.
- For consumers diagnosed with *childhood psychoses*, proportionally more Caucasians were in the youngest age group (0-5 years), suggesting that African-Americans may not be diagnosed until they are older. Caucasians used BHRS services in higher proportions, and also used more units of BHRS. A large percentage of Caucasians with this diagnosis were eligible through the "loophole." Median costs for those eligible through the "loophole" were significantly higher than median costs for those not eligible through the "loophole."
- More African-Americans were diagnosed with *conduct disorders* than Caucasians, which makes this diagnostic profile a little different from the others. African-Americans were more likely to use outpatient mental health and partial hospitalization services, while Caucasians were more likely to use medication checks, case management, family-based treatment, and BHRS. African-Americans were likely to stay in partial hospitalization longer. They also used some community-based services more intensively than Caucasians, a departure from usual patterns.

However, Caucasians had higher median costs than African-Americans, while African-American males had higher costs than Caucasian females, which suggests that gender was possibly a more important determinant of costs than race.

- African-American and Caucasian consumers diagnosed with *drug and alcohol related disorders* were older when compared to the other diagnostic groups. While eligibility lengths followed the same pattern in that African-Americans were eligible for longer periods than Caucasians, the proportion of consumers of either race eligible for a full year was significantly *lower* than for other categories. As expected, this group used drug and alcohol-related services primarily, although a significant proportion also used outpatient mental health services. Half of African-American consumers and 40% of Caucasian consumers used two or fewer units of outpatient mental health services; therefore, engagement in outpatient treatment for both races may be low. Median costs were higher for Caucasians in general, which suggests that gender was not as important as race in determining costs for this diagnostic profile.
- The racial profile of consumers who were diagnosed with *emotional disturbances* was fairly similar in terms of age and gender profiles and eligibility lengths. Caucasians were more likely than African-Americans to use medication checks, case management and BHRS. Median costs for Caucasians were significantly higher than those for African-Americans. Males had higher costs than females within racial groups.
- Two thirds of consumers diagnosed with *major depression* were Caucasian. The gender profiles were similar, while the age profiles showed some differences in that Caucasians were more likely than African-Americans to be in the oldest age group. Eligibility lengths were comparable. Unlike other diagnostic groups, a relatively high proportion of African-American consumers (17%), compared to Caucasian consumers (9%), used inpatient mental health as their first HealthChoices service. African-Americans used inpatient mental health services in larger proportions than Caucasians. On the other hand, Caucasians used medication checks in larger proportions than African-Americans. African-Americans also appeared to be less engaged with outpatient mental health services, as 38% used two or fewer units of outpatient mental health services. Median costs were higher for African-Americans, which made this diagnostic group one of two to display this trend (the other being neurotic and other depressive disorders). This appears to be related to the higher proportion of African-Americans who used inpatient mental health services.
- About 60% of all consumers diagnosed with *neurotic and other depressive disorders* were Caucasian. The two racial groups were fairly similar in terms of gender profiles and eligibility lengths while the age profiles showed some differences. African-Americans proportionally were more likely than Caucasians to use inpatient mental health and less likely to use medication checks. The two racial groups were remarkably close in terms of costs: median costs for Caucasians were 90% of median costs for African-Americans. Males had higher median costs than females within each racial group.
- Approximately three-fifths of consumers diagnosed with *stress and adjustment disorders* were Caucasian. The age and gender profiles were similar. The racial groups were also similar in terms of the pattern and amounts of services used. Median costs by race were very similar and the costs to treat this disorder were also lower than other disorders.

Discussion and Recommendations

African-Americans are over-represented in high-need populations and therefore rely more heavily on the government “safety net” of services, a high proportion of which is paid for through Medicaid. Medicaid-funded providers “have been more successful than others in reducing disparities in access to mental health treatment” (SGR Supplement 63). Some Allegheny County providers have focused outreach efforts on the African-American population; Allegheny County and Community Care have collaborated with other organizations and funded and conducted specific outreach and treatment efforts for African-Americans. The relative success of Medicaid and the efforts of providers, Allegheny County and Community Care in improving access to services for African-Americans should be recognized, and an in-depth analysis of 2003 data may show improved access to treatment as a result.

Because of the complexities of how and why children and youth qualify for HealthChoices, using research-based prevalence estimates to develop goals for where the Allegheny County system should be is very difficult. African-Americans were enrolled in HealthChoices for longer time periods than Caucasians and are not expected to have a lower need for treatment than Caucasians, indicating that there is more work to be done in equalizing access to quality treatment for minorities in Allegheny County. These findings lead to multiple opportunities for barrier analysis and discussion within the behavioral health system and with other systems, including child welfare services, the juvenile probation office, and the educational system.

Access

Within age and gender groups, access rates for African-Americans were always lower than Caucasian access rates. Larger gaps were identified for the youngest group (0-5 year olds) and the older group (18-20 year olds). A discussion of barriers for young children and older adolescents should be completed to determine if specific interventions by age group should be implemented. For children of school-age, collaboration with schools in outreach and assessment should be investigated.

African-Americans, in all eligibility categories except when income was not considered, had lower access rates for treatment. The largest difference occurred for enrollees who were eligible because of poverty, rather than disability. This finding fits with the findings in the Surgeon General’s Report.

African-American children and youth with histories of involvement with social services accessed treatment at lower rates than Caucasians with social service histories. AHCI has done additional analyses of children with histories of involvement with social services and will release a supplementary report on these findings. Collaborative discussions of this data with the behavioral health system, CYF, and JPO will be essential in determining barriers and possible opportunities for training in these other systems.

When the various services were considered, African-Americans consistently accessed individual services at lower rates than Caucasians. Further discussion with BHRS, case management and family-based services and consumer/family stakeholders would be helpful in identifying possible explanations for differences in access rates. Because racial gaps in access rates for partial hospitalization services were the smallest, and African-Americans used more units of this service, discussion with these providers and consumer/family stakeholders could help determine if this is a difference in how treatment is sought, and what roles the school districts play in referring consumers to these services.

Treatment

While outpatient mental health services were the most commonly used service type, low median usage indicated that consumers, regardless of race, very often had less than one hour of treatment. Barriers for consumers in engaging and staying in outpatient treatment should be investigated.

When amounts of individual services were compared, the data ranged widely, making interpretation challenging when comparing racial groups. It is difficult to assess whether or not different amounts of treatment result in less effective treatment. Input from families, providers and other stakeholders including the educational system will be helpful in interpreting these differences.

Overall, the diagnostic patterns by race were very similar. The comparative low rate of African-Americans diagnosed with childhood psychoses (autism) should be further assessed and discussed. Also, the differences between races in the diagnosis of conduct and emotional disturbance disorders in contrast to the diagnosis of depression or neurotic disorders should be shared with providers.

Many of the findings on types and amounts of services used by race were consistent when the individual diagnostic groups were examined. In sum, African-American and Caucasian treatment patterns were more similar than they were different when examined by diagnosis. However, the combination of higher use of BHRS by Caucasians, and their greater likelihood of using more than one service type, often resulted in Caucasians receiving treatment that had higher costs.

Conclusion

Our findings should be interpreted in this context: while the Medicaid system reduces disparities in access, and the Allegheny County system has worked to reduce disparities as well, racial disparities in health care access and treatment are a pervasive and complex issue affecting all regions of the country.

AHCI's goal in writing this report is to provide the system with data that can be discussed and used to identify possible barriers to treatment and appropriate interventions for particular groups of HealthChoices enrollees beyond current discussions and interventions. AHCI plans to collaborate with Allegheny County and Community Care in organizing discussions of these findings and their implications with providers, family members, and other systems, including the child welfare, juvenile probation, and educational systems. Specifically, discussions should include:

- Outreach and assessment for specific age groups;
- Access rates by race with BHRS, case management, family-based and partial hospitalization providers;
- Access rates, service utilization and diagnostic information with the child welfare and juvenile justice systems;
- Engagement when entering the system through outpatient services; and
- Differences in diagnostic patterns.

We look forward to the opportunity to participate in discussions with the County, Community Care, providers and other stakeholders, and are more than willing to complete additional analyses on this subject based on stakeholder questions and suggestions.

Diagnostic Profiles Appendix

This section includes a “Diagnostic Profile” for eight diagnostic categories. Because different diagnoses require different types of service, amounts of service, and duration of service for effective treatment, service use patterns by race *within diagnostic groups* were compared. Diagnoses received by at least 5% of the consumer population 0-20 years during 2002 were selected for analysis. The following conventions were uniformly applied for all eight diagnostic categories analyzed in the following section.

- (1) Analyses were restricted to two racial groups: African-American and Caucasian. The ‘Other’ category was not included in the analysis because the numbers of consumers in this category were too small making comparisons with other groups difficult.
- (2) Data on amounts of services used and costs of treatment were characterized by very high or very low values. As a result, the *median* is a far more reliable indicator and was used throughout the report to express differences in amounts of services used and costs.
- (3) For service use by race, we reported only those services where the difference in proportional use of services was at least 5%. By way of example, for consumers diagnosed with ADHD, 71% of African-Americans and 68% of Caucasians used outpatient mental health services. The difference between African-Americans and Caucasians in proportional use of outpatient mental health services was three percentage points and was not reported as a difference. On the other hand, the difference in the proportional use of case management services was reported because it exceeded 5%.
- (4) A few services by their very nature, such as outpatient mental health services and medication checks, have low mean and median levels of utilization. So, comparative differences between races in amounts of service used tend to get unduly magnified. For example, if Caucasians used 3 units of medication checks versus 2 units for African-Americans, the difference in service use would be 50%. However this large difference is only because of the small number of units used by both races. To put this in perspective, we have reported services with smaller units of utilization separately. Only those services where the racial difference in amounts used exceeded 10% were reported.
- (5) Because outpatient mental health services were the most commonly used service overall and median usage was low, we compared the percentage of African-Americans and Caucasians who had two or fewer units of this service. The proportion of consumers with two or fewer outpatient units shows how many consumers may not have “engaged” with outpatient treatment, as they would have received one hour or less of treatment.
- (6) Analyses of consumers who did and did not qualify for the “loophole” were reported for only four categories: *ADHD, childhood psychoses, major depression & affective psychoses and neurotic & other depressive disorders*. The remaining four diagnostic categories were excluded from this additional analysis, based on the very small number of consumers within these categories who qualified for the “loophole.”

ADHD Profile

Profile of consumers with ADHD

Attention-Deficit/Hyperactivity Disorder (ADHD) has two separate categories of symptoms: inattention, and hyperactivity (or impulsivity). Most children with this disorder have both categories of symptoms, but both are not necessary for a diagnosis of ADHD. Often, symptoms do not appear until children enter school. In an accurate diagnosis, the clinician should assess that symptoms have persisted for at least six months, and that impairment in at least two settings has resulted from symptoms. Boys are diagnosed with ADHD four times more often than girls (SGR 143-144).

The following profile outlines the characteristics and service use patterns of children diagnosed with ADHD during 2002 in the Allegheny County HealthChoices population.

Age and gender characteristics by race

- 51% of consumers diagnosed with ADHD were Caucasian (1026 out of 1996) while 47% were African-American (932 out of 1996).
- 79% of consumers in both racial groups with this diagnosis were male.
- The age patterns were also similar by race, with the majority of consumers falling in the 6-12 year age group (59% - 64%), followed by the 13-17 year age group (31%).

HealthChoices eligibility length and type by race

- A higher proportion of Caucasians (49%) than African-Americans (43%) were eligible through SSI. About 14% of Caucasians (144 out of 1,026) were eligible for HealthChoices through the “loophole”, compared to 2% (19 out of 932) of African-Americans.
- 85% of African-Americans and 80% of Caucasians had full-year eligibility through HealthChoices. Of those with less than a full-year’s eligibility, African-Americans were eligible for an average of 8.4 months, compared to 7.4 months for Caucasians.

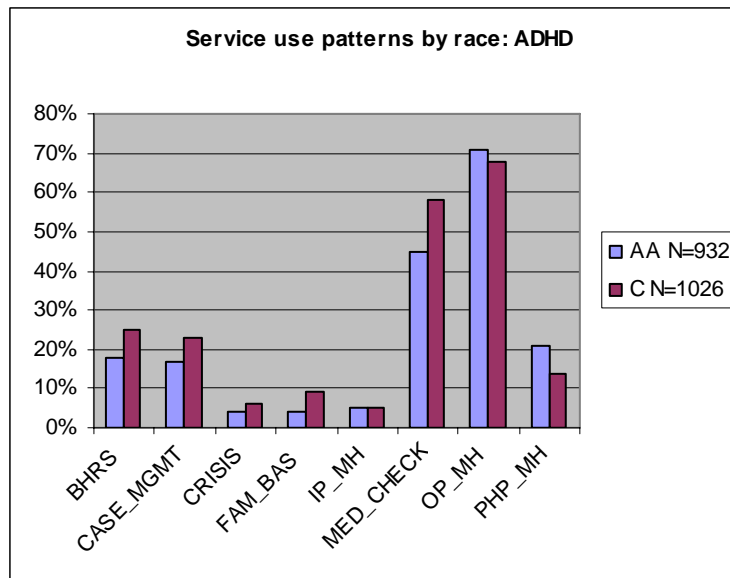
Discussion

The higher proportion of boys and higher proportion of school-age children with ADHD is expected, given the description of the disorder. Because of these overall similarities between races, we conclude that any differences in patterns of service use were not caused by differences in gender, age groups or length of HealthChoices eligibility.

First service received under HealthChoices

- About 60% of consumers used outpatient mental health as their first service
- Caucasians were more likely than African-Americans to use BHRS as their first service (13% vs. 9%).
- African-Americans were more likely than Caucasians to use partial hospitalization as their first service (8% vs. 4%).
- Medication checks were also a common first service received by both races.

Service use patterns by race



As shown in the chart above, both racial groups used similar mixes of services, with outpatient mental health and medication checks being the most commonly used services. Several important differences were observed:

- A larger proportion of African-Americans than Caucasians used partial hospitalization services (21% vs. 15%).
- A larger proportion of Caucasians than African-Americans used family-based services (8.5% vs. 3.6%), BHRS (24.9% vs. 18%), case management services (23.2% vs. 17.3%) and medication checks (58% vs. 45%). Caucasians eligible through the “loophole” used BHRS in even higher proportions (43%).
- African-Americans were more likely (44%) than Caucasians (36%) to use only one service type within the year.

Amounts of services used

- When looking at the median units used, African-Americans used 39% more units of partial hospitalization and 28% more units of RTF than Caucasians. On the other hand, Caucasians used 14% more BHRS, 28% more case management and 12% more units of family-based services than African-Americans. Very similar trends are observed when comparing African-American consumers to Caucasians who qualified for the “loophole.”
- 29% of African-Americans with ADHD used two or fewer units of outpatient mental health services. The corresponding number for Caucasians was 26%. There appeared to be similar rates of engagement with outpatient mental health across races.
- For consumers who used only one service type, Caucasians used almost twice the number of BHRS units (641 vs. 324 units) and 60% more units of case management (104 units vs. 65 units). For all other services, the number of consumers in one (or both) groups was too small for valid comparisons to be made.
- The number of consumers with ADHD who used only one unit of service was 127. Of these, 57 were African American (6.1% of all African-Americans with ADHD) and 70 were Caucasian (6.8% of all Caucasians with ADHD).

Cost profile by race and gender

Race/gender	# Cons.	Mean (\$)	Median (\$)
AAF	196	3,020	580
AAM	736	5,885	935
African-American Total	932	\$5,283	\$858
CF	224	5,644	848
CM	802	6,926	1,179
Caucasian Total	1,026	\$6,646	\$1,032

- Median costs for Caucasians were about 20% higher than those for African-Americans. The median cost for the diagnostic group as a whole was \$996, which makes the median Caucasian cost marginally higher, while African-American median costs are 14% lower than the diagnostic group median.
- The median cost for Caucasian males was approximately twice that of African-American women. Males within either group had higher costs than females and African-American males had higher costs than Caucasian females.

Conclusions

- Age and gender profiles were similar by race and the eligibility lengths were also comparable. Age and eligibility lengths should not have been factors in service use.
- Outpatient mental health was the most commonly used service. The two races showed similar rates of engagement, as measured by the proportion who used two or fewer units of outpatient mental health.
- Median costs for Caucasians were more than that for African-Americans. Males had higher costs than females.

Childhood Psychoses Profile

Profile of consumers with childhood psychoses

This diagnostic group includes several individual diagnoses: autistic disorder, Asperger's disorder, and pervasive development disorder (not otherwise specified). Autism, a chronic condition which often results in significant disability throughout life, is the most common of these developmental disorders. Males are four to five times more likely than females to be diagnosed with these disorders (SGR 163) and African-Americans and Caucasians have similar rates of these disorders (Fombonne 1). People with autism "tend to have problems with social and communication skills,...repeat certain behaviors,... and have unusual ways of learning, paying attention, or reacting to different sensations" (CDC Autism Information Center 1).

Higher prevalence estimates of autism-related disorders in recent years have provoked concern of an autism "epidemic." The higher estimates may be the result of different methodologies in research studies, broader definitions of the disorders included, and better identification of children with these disorders; conclusive evidence of an increase in the rate of children having these disorders is lacking (Fombonne 1).

While no evidence has suggested African-Americans have lower rates of these disorders, research *has* found differences in the age at which children are diagnosed with these disorders. According to one study of a Medicaid-eligible population, African-Americans tend to be diagnosed 1.5 years later than Caucasians. This delay may be the result of many factors, including physician delays in screening or the lack of regular visits for health care (Mandell 1550).

Because of the severity and chronic nature of these diagnoses, treatment is often intensive and long term. Treatment focuses on improving children's communication and social skills; some research has shown that intensive treatment with very young children can result in positive outcomes (SGR 163).

The following profile outlines the characteristics and service use patterns of children diagnosed with these disorders during 2002 in the Allegheny County HealthChoices population.

Age and gender characteristics by race

- Consumers in this diagnostic group were predominantly Caucasian (83%).
- About 82% of consumers with this diagnosis in both racial groups were male.
- About 54% of consumers in both racial groups were in the 6-12 year age group. Proportionally more African-Americans were older; 28% of African Americans were 13-17 years, compared to 13% of Caucasians. Proportionally more Caucasians were in the 0-5 year age group (29%) compared to African-Americans (13%).

HealthChoices eligibility type and length by race

- 84% of African-Americans and 94% of Caucasians were eligible for HealthChoices through SSI. The majority of these Caucasians were eligible through the "loophole" (389 consumers, 65%). A much smaller proportion of African-Americans were eligible through the "loophole" (22 consumers, 23%).
- A significant proportion of African-Americans were also eligible through TANF (15%).
- 87% of African-Americans and 76% of Caucasians were eligible for all of 2002. For those eligible for less than a year, African-Americans were eligible for longer periods than Caucasians (7.9 months vs. 7 months).

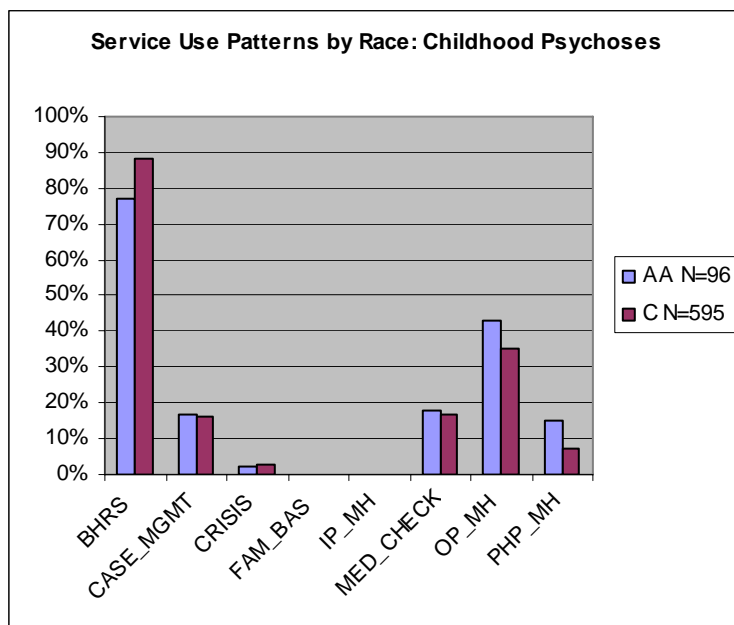
Discussion

As African-Americans were eligible for HealthChoices for longer periods than Caucasians, differences in amount and type of treatment received were not due to African-Americans having shorter periods of HealthChoices eligibility. Differences may be related to the different age distributions of the two racial groups. This diagnostic category was the only one where a majority of consumers (59%) were eligible for HealthChoices through the “loophole”.

First service received under HealthChoices by race

- About 62% of all consumers used BHRS as their first service, followed by outpatient mental health (28%).
- Caucasians were more likely to use BHRS as their first service than African-Americans (65% vs. 38%), while African-Americans were more likely to use outpatient mental health than Caucasians (42% vs. 25%).
- All other services were rarely used as first services.

Service use patterns by race



As shown in the chart above, African-Americans and Caucasians used similar types of services. The great majority of consumers used BHRS, with many also using outpatient mental health services.

- Caucasians were more likely to use BHRS than African-Americans (88% vs. 77%).
- African-Americans were more likely to use outpatient mental health services (43% vs. 35% of Caucasians) and partial hospitalization services (15% vs. 7% of Caucasians).
- Caucasians (56%) were more likely than African-Americans (49%) to use only one service type within the year.

Amounts of services used

- When median units of services were examined, Caucasians (whether eligible through the “loophole” or not) used about 34% more units than African-Americans of BHRS (1000 units vs. 746 units).
- African-Americans used 60% more units of case management (226 units vs. 141 units). For all other services, amounts of services used were similar (or group sizes were too small to analyze).
- 27% of African-Americans and 22% of Caucasians had less than or equal to 2 units of outpatient mental health (1 hour of treatment). This suggests African-Americans may have had slightly lower rates of engagement with outpatient services.
- For consumers who used *only one* service, Caucasians used 14% more units of BHRS than African-Americans. No significant differences between races existed for other service categories.
- The number of consumers with childhood psychoses who used *only one unit* of service was 15. Of these, 3 were African-American (3.1% of all African-Americans with childhood psychoses) and 12 were Caucasian (2% of all Caucasians with childhood psychoses).

Cost profile by race and gender

	# Cons.	Mean \$	Median \$
AA F	17	18,358	5,600
AA M	79	14,400	9,198
AA Total	96	\$15,101	\$8,385
C F	104	16,085	10,635
C M	491	18,124	14,055
C Total	595	\$17,767	\$13,110

The expense of treatment varied widely. When comparing the median costs by race and gender, African-American females (a very small group) had the lowest median cost, representing only about 40% of the median cost of treatment for Caucasian males. Median African-American male costs represented about 65% of Caucasian male costs; African-American female costs represented about 53% of Caucasian female costs.

Median cost comparison by “loophole” status

Because this diagnostic group has a large percentage of consumers who were eligible through the “loophole,” median costs based on “loophole” status were compared. Results varied by race and gender.

Race/Gender	“loophole”		Non-“loophole”		Total	
	# Cons.	Median Cost (\$)	# Cons.	Median Cost (\$)	# Cons.	Median Cost (\$)
AAF	1	64	16	6,048	17	5,600
AAM	21	13,950	58	7,948	79	9,198
AA Total	22	\$13,478	74	\$7,775	96	\$8,385
CF	66	10,365	38	12,002	104	10,635
CM	323	15,520	168	11,155	491	14,055
C Total	389	\$13,890	206	\$11,320	595	\$13,110

Caucasian males eligible through the “loophole” cost two times as much to treat as African-Americans not eligible through the “loophole” and 1.4 times more than Caucasians not eligible through the “loophole.” When only those eligible through the “loophole” were compared, African-American costs were about 90% of Caucasian costs.

Conclusions

- The differences in the age distribution of consumers suggest that young African-American children with these disorders either were not identified as early as young Caucasian children, or they did not receive treatment through the behavioral health system as frequently at these young ages. Given the importance of early identification, this trend should be further investigated.
- While all race and gender groups primarily used BHRS for treatment, African-Americans were somewhat less likely to use BHRS, and used fewer units when they did. This may be the result of differences in the amount of treatment prescribed by providers, or in the amounts of services African-Americans chose to use. Differences primarily in BHRS utilization resulted in significantly lower African-American median costs for treatment.
- Outpatient mental health services were commonly used. Many social skills treatment groups are included in this category. Because this type of service can be quite effective in helping children and adolescents develop social and communication skills, use of this service was expected. The higher proportion of African-Americans using outpatient mental health services may be related to their older age.

Conduct Disorders Profile

Profile of consumers with conduct disorders

It is generally understood that the causes of conduct disorders are both biological and psychosocial (SGR 165). Oppositional defiant disorder (included in the emotional disturbances profile) is often a precursor to conduct disorder. Males are more likely to be diagnosed with conduct disorder before the age of 10, but thereafter the gender differences are less pronounced. It is still unclear what the exact causes of the disorder are, but children with the disorder are more likely to develop adult antisocial personality disorder (SGR 165). Existing studies have been criticized for excluding women and certain ethnic minority groups.

The following profile outlines the characteristics and service use patterns of children diagnosed with conduct disorder during 2002 in the Allegheny County HealthChoices population.

Age and gender characteristics by race

- 56% of all consumers diagnosed with conduct disorders were African-American (291 out of 519), while 43% were Caucasian (224 out of 519).
- The gender profiles were similar by race. Approximately 70% of consumers diagnosed with conduct disorders for both races were male.
- The distribution in the 0-5 and 6-12 year age groups was nearly the same for both races (13% and 39% respectively). Proportionally, there were more African-Americans than Caucasians in the 13-17 year age group (43% vs. 35%), while the converse was true for the 18-20 year age group (13% Caucasian vs. 5% African-American).

HealthChoices eligibility type and length by race

- 53% of African-Americans diagnosed with conduct disorders were eligible for HealthChoices through TANF (as compared to 41% of Caucasians). Proportionally, African-Americans and Caucasians had comparable levels of SSI eligibility (37% vs. 40%), while more Caucasians were eligible through Healthy Beginnings than African-Americans (19% vs. 9%).
- 81% of African-Americans and 71% of Caucasians had full-year HealthChoices eligibility. For those with less than a year's eligibility, African-Americans were eligible for 8.5 months compared to 7.2 months for Caucasians.

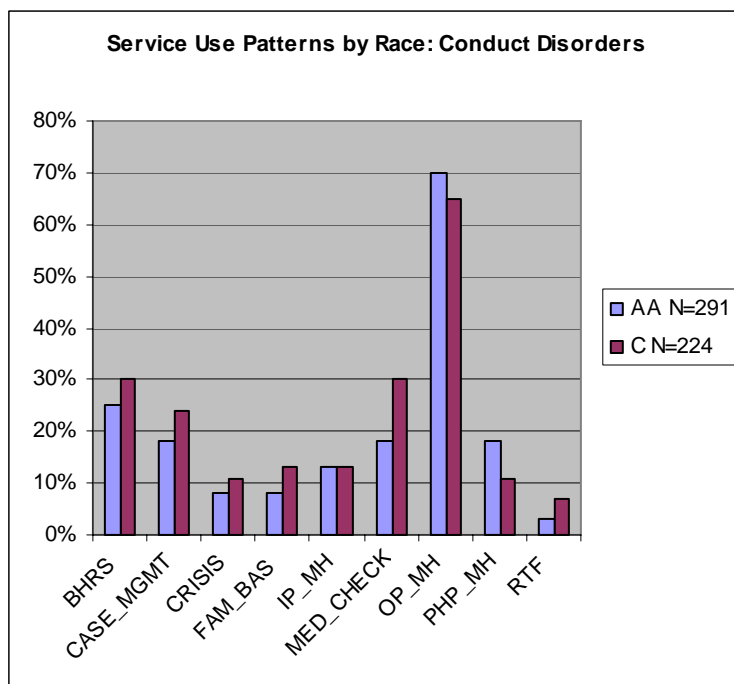
Discussion

The gender and age profiles were similar. African-Americans had a slightly higher eligibility length than Caucasians. Therefore, if African-Americans used fewer services than Caucasians, it was not because they had lower eligibility lengths.

First service received under HealthChoices

- 55% of consumers diagnosed with conduct disorders used outpatient mental health as their first service. BHRS was another important first service, accounting for 13.3% of consumers diagnosed with conduct disorders.
- Proportionally, African-Americans were more likely than Caucasians to use outpatient mental health services (58% vs. 50%) or partial hospitalization (9% vs. 3.6%) as their first service. Caucasians were more likely to use BHRS than African-Americans (18% vs. 10%). For all other services, there was no significant difference in the first service used under HealthChoices.

Service use patterns by race



As shown in the chart above:

- African-Americans were more likely to use outpatient mental health services (70% vs. 65%) and partial hospitalization (18% vs. 11%).
- Caucasians were more likely to use medication checks (30% vs. 18%), case management (24% vs. 18%), family-based treatment (13% vs. 8%) and BHRS (30% vs. 25%). Since consumers can receive medication checks in partial hospitalization, some of the difference in medication checks may be offset by greater use of partial hospitalization by African-Americans.
- For all other services, there were no significant differences in proportional use.
- 53% of African-Americans (153 out of 291) and 45% of Caucasians (100 out of 224) diagnosed with conduct disorders used *only one* service type in 2002.

Amounts of services used

- When comparing median use, African-Americans used 55% more partial hospitalization (502 units vs. 324 units), 11% more family based services (233 units vs. 210 units) and 42% more case management (206 units vs. 145 units).
- Caucasians used 70% more units of BHRS (490 units vs. 289 units) than African-Americans.
- 33% of African-Americans and 38% of Caucasians diagnosed with conduct disorders used *two or fewer units* of outpatient mental health services. African-Americans used more outpatient mental health services (6 units vs. 4 units). Thus, African-Americans were slightly more engaged than Caucasians with respect to use of outpatient mental health services.
- For consumers who used *only one service*, African-Americans used more outpatient mental health services (6 units vs. 2.5 units) and BHRS (473 units vs. 212 units) than Caucasians. For all other services, differences in service use and/or number of consumers in each group were too small to be reported and are not discussed further.

Does Race Matter?

- 63 consumers diagnosed with conduct disorders used *only one unit* of service. Of these, 34 were African-American (11.7% of all African-Americans diagnosed with conduct disorders) and 29 were Caucasians (13% of all Caucasians diagnosed with conduct disorders).

Cost profile by race and gender

Race/gender	# Cons.	Mean (\$)	Median (\$)
AAF	89	6,765	693
AAM	202	7,178	1,778
African-American Total	291	\$7,052	\$1,470
CF	53	7,957	930
CM	171	11,624	2,580
Caucasian Total	224	\$10,757	\$1,863

- Median costs for Caucasians were 27% more than that for African-Americans (\$1,863 vs. \$1,470). The median cost for all consumers diagnosed with conduct disorders was \$1,740, which implies that average costs for Caucasians were 7% above the diagnostic group average, while African-Americans were 15% below the group average.
- The greatest differences in median costs were between African-American females (\$693) and Caucasian males (\$2,580). Treatment costs for African-American males were nearly twice the treatment costs for Caucasian women (\$1,778 vs. \$930). Thus gender and costs were correlated: males in general had higher costs than females.

Conclusions

- More African-Americans were diagnosed with conduct disorders than Caucasians. This makes this diagnostic profile different from the others.
- Outpatient mental health services and BHRS were the most commonly used services by both races. African-Americans were more likely than Caucasians to use more than two units of outpatient mental health services, and thus seem more engaged, with respect to outpatient mental health use. Proportionally, more African-Americans used partial hospitalization services and also stayed in these services longer. African-Americans also used more units of some home-based services, which is different from the pattern seen with other diagnostic services.
- Caucasians in general had a higher median cost than African-Americans. However, African-American males had a higher cost than Caucasian females, which suggests that gender was a more significant determinant of costs than race.

Drug and Alcohol Related Disorders Profile

Profile of Consumers with Drug and Alcohol related disorders

About 8.9% of youth 12-17 years and 21.7% of individuals 18-25 years are estimated to abuse or be dependent on alcohol or drugs. Overall, African-Americans and Caucasians have similar rates of drug and alcohol related disorders (SAMHSA 27). Substance abuse disorders very often co-occur with mental disorders. Little is understood about how mental disorders may increase the risk of substance abuse in children and adolescents, although stress seems to play a significant part (SGR 167).

In 2002, only 4.6% of Allegheny County HealthChoices consumers 0-20 years were in this diagnostic group. Of the 2002 cohort studied, AHCI is confident that there is under-reporting of the number of consumers with substance related disorders, because only those consumers who had a drug or alcohol related disorder as their primary diagnosis during 2002 were counted (see the Technical Appendix for more information on how diagnoses were determined). Consumers with mental disorders who may have used substance abuse services or had a secondary substance-related diagnosis during 2002 are not included in this profile.

The following profile outlines the characteristics and service use patterns of children diagnosed with these disorders during 2002 in the Allegheny County HealthChoices population.

Age and gender characteristics by race

- 62% of consumers diagnosed with drug and alcohol related disorders were Caucasians, while 36% were African-Americans.
- Approximately 60% of consumers from both racial groups were male.
- African-Americans were more likely than Caucasians to be 13-17 years (67% vs. 47%), while Caucasians were more likely to be 18-20 years (53% vs. 32%).

HealthChoices eligibility length and type by race

- 78% of African-Americans were enrolled in HealthChoices through TANF, compared to 68% of Caucasians. Proportionally, more Caucasians were eligible for HealthChoices through Healthy Beginnings (13% vs. 11%), while for SSI, the respective numbers were comparable (9% for Caucasians vs. 8% for African-Americans).
- 5% of Caucasians were enrolled in HealthChoices through Federal General Assistance, compared to 2% of African-Americans. Thus, the profile of eligibility type is different from other diagnostic categories, where almost all consumers are enrolled in HealthChoices through TANF, Healthy Beginnings or SSI.
- 42% of African-Americans and 27% of Caucasians had full-year eligibility. While this is consistent with the overall pattern of more African-Americans being eligible for a full year than Caucasians, the number of consumers of either race eligible for a full year was significantly lower than for other diagnostic categories. Of those consumers who had less than a full year's eligibility, African-Americans were on average eligible for 8.3 months as compared to 7.3 months for Caucasians.

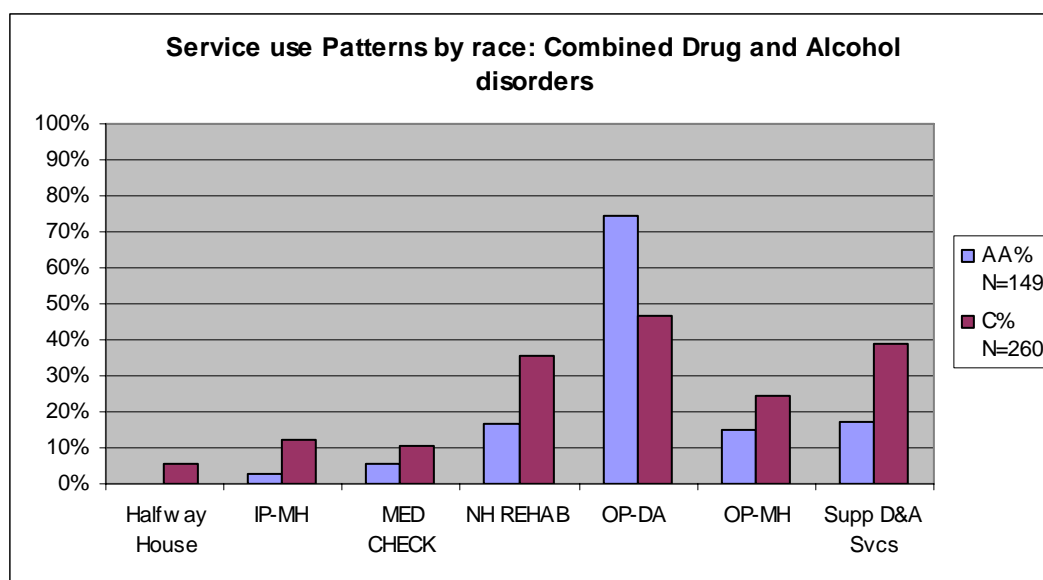
Discussion

The gender profiles were very similar while the age profiles by race were different. The lower proportion of consumers of both races who had less than a year's eligibility may impact service use by consumers diagnosed with drug and alcohol related disorders.

First service used under HealthChoices

- 28% of consumers used outpatient mental health as their first service, followed by outpatient drug and alcohol treatment services (23%). Supplemental drug and alcohol related services* (12%) and non-hospital rehabilitation services (11%) were other first services used.
- African-Americans proportionally used more outpatient drug and alcohol related services compared to Caucasians (33% vs. 18%). On the other hand, Caucasians used more supplemental drug and alcohol services than African-Americans (15% vs. 6%) and non-hospital detoxification services (8% vs. none).
- For all other services, there were no significant differences in proportional use of services.

Service use patterns by race



- Caucasians used all services in larger proportions than African-Americans with the exception of outpatient drug and alcohol services.
- 67% of African-Americans (100 out of 149) and 40% of Caucasians (103 out of 260) diagnosed with drug and alcohol related disorders used *only one* service type during 2002.

Amounts of services

- When comparing median use, African-Americans used 47% more non-hospital rehabilitation services (28 units vs. 19 units) than Caucasians.
- Caucasians on the other hand, used more outpatient drug and alcohol services (10 units vs. 7 units for African-Americans) and more supplemental drug and alcohol services (108 units vs. 72 units). For all other services, the number of consumers in each group was too small for valid comparisons to be made.
- 50% of African-Americans and 39% of Caucasians used *two or fewer units* of outpatient mental health services. Overall, Caucasians used more outpatient mental health services than African-Americans (4 units vs. 2.5 units, representing a difference of 45 minutes in median amount of treatment received). Thus with respect to outpatient mental health, Caucasians appeared to be

* For the adolescent population in 2002, this primarily included intensive drug and alcohol outpatient services.

more engaged with services than African-Americans, but neither group appears to receive this service for very long.

- For consumers who used *only one service*, the only valid comparison in amounts of services used (based on population size considerations) could be made for outpatient drug and alcohol services. Caucasians used more outpatient drug and alcohol services compared to African-Americans (9 units vs. 5 units).
- 49 consumers used *only one unit* of service. Of these, 26 were African-American (17% of all African-Americans diagnosed with drug and alcohol related disorders) and 22 were Caucasian (8.5% of all Caucasians diagnosed with drug and alcohol related disorders).

Cost profile by race and gender

Race/gender	# Cons.	Mean (\$)	Median (\$)
AAF	56	1,842	182
AAM	93	1,984	364
African-American Total	149	\$1,930	\$312
CF	107	3,687	1,182
CM	153	3,710	1,550
Caucasian Total	260	\$3,700	\$1,345

- Median costs for Caucasians were over four times those for African-Americans (\$1,345 vs. \$312). The range for Caucasians was also significantly higher than that for African-Americans, which suggests higher variability in the Caucasian cost profile.
- The greatest difference in median costs was seen between African-American females (\$182) and Caucasian males (\$1,550).

Conclusions

- While the gender profile for the two racial groups was similar, the age profile was different. This could be an engagement issue; existing services might have reached African-Americans less frequently in the 18-20 year group.
- Eligibility type differed from other diagnostic groups in that consumers qualified for HealthChoices through categories other than TANF, SSI and Healthy Beginnings.
- African-Americans used fewer services, and smaller amounts of services (with the exception of non-hospital rehabilitation). Engagement in treatment for both races appeared to have been low, although eligibility length may be an important factor.
- Median costs were higher for Caucasians. Racial differences were larger than gender differences in terms of costs.

Emotional Disturbances Profile

Profile of consumers with emotional disturbance disorders

This diagnostic category includes oppositional defiant disorder (ODD) and other infrequently received diagnoses. These diagnoses are often found in children who have Attention-Deficit Hyperactivity Disorder (ADHD) and lead to persistent patterns of defiance and/or hostility towards authority figures (SGR 164). Pre-pubescent boys are more likely to be diagnosed with this disorder than girls, although after puberty gender differences are less pronounced. Emotional disturbances are often a precursor to conduct disorders, which makes early detection and treatment very important.

The following profile outlines the characteristics and service use patterns of children diagnosed with these disorders during 2002 in the Allegheny County HealthChoices population.

Age and gender characteristics by race

- About 54% of consumers diagnosed with emotional disturbances were African-American (448 out of 836), while approximately 45% were Caucasian (374 out of 836).
- For both racial groups, males constituted between 60% and 70% of the total number of consumers. Proportionally, more African-American males than Caucasian males were diagnosed with emotional disturbances.
- The age profiles were very similar. A slightly higher percentage of African-Americans were in the 6-12 year age group (50% vs. 45%).

HealthChoices eligibility type and length by race

- 61% of African-Americans were eligible for HealthChoices through TANF, compared to 39% of Caucasians. On the other hand, more Caucasians than African-Americans were eligible for HealthChoices via SSI (37% vs. 27%) and Healthy Beginnings (24% vs. 12%).
- 85% of African-Americans and 75% of Caucasians had full-year HealthChoices eligibility. Of those with less than a year's eligibility, African-Americans were eligible for an average of approximately 9 months, compared to 8 months for Caucasians.

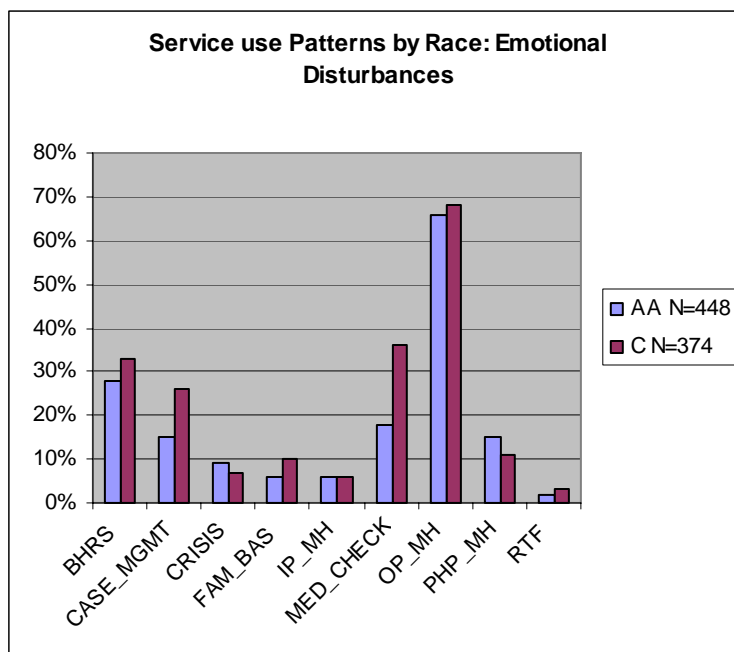
Discussion

The age and gender profiles were similar. Average eligibility lengths for African-Americans were slightly higher than for Caucasians, which implies that if African-Americans used fewer services than Caucasians, it was for reasons other than eligibility length.

First service received under HealthChoices

- 61% of consumers diagnosed with emotional disturbances used outpatient mental health as their first service. Other relatively commonly used first services were BHRS (used by 11% of consumers) and partial hospitalization (used by 7% of consumers).
- Proportionally, African-Americans used more outpatient mental health services as a first service compared to Caucasians (64% vs. 57%), while Caucasians used more BHRS (13.6% vs. 8.7%) and medication checks (8.2 % vs. 2.2%). For all other services, there was no significant difference in proportional use as a first service.

Service use patterns by race



As the chart above indicates:

- Proportionally, Caucasians were more likely to use medication checks (36 % vs.18%), case management (26% vs. 15%) and BHRS (33% vs. 28%).
- For all other services, there were no significant differences in proportional use.
- 57% of African-Americans (256 out of 448) and 42% of Caucasians (158 out of 374) diagnosed with emotional disturbances used only one service type during 2002.

Amounts of services used

- Caucasians used 33% more family-based services (297 units vs. 223 units), 14% more case management (181 units vs. 159 units) and 30% more BHRS (409 units vs. 314 units) than African-Americans.
- For all other services, no significant difference in service use between races was observed.
- 36% of African-Americans diagnosed with emotional disturbances *used two or fewer units* of outpatient mental health services, compared to 32% of Caucasians diagnosed with the same disorder. When comparing median use, African-Americans used more outpatient mental health services than Caucasians (7 units vs. 5 units). Thus, both races were comparably engaged with respect to outpatient mental health services.
- For consumers who used *only one service*, African-Americans used more units of outpatient mental health services (8 units vs. 6 units). On the other hand, Caucasians used 230% more BHRS (355 units vs. 155 units) than African-Americans.
- 67 consumers diagnosed with emotional disturbances used *only one unit of service*. Of these, 47 were African-American (10.5% of African-Americans diagnosed with emotional disturbances) while 19 were Caucasian (5% of Caucasians diagnosed with emotional disturbances).

Cost profile by race and gender

Race/gender	# Cons.	Mean (\$)	Median (\$)
AAF	145	3,902	638
AAM	303	5,710	1,140
African-American Total	448	\$5,125	\$1, 019
CF	148	8,038	1,551
CM	226	7,216	1,796
Caucasian Total	374	\$7, 541	\$1, 631

- Median costs for Caucasians were 60% more than those for African-Americans. When compared to the diagnostic group average (\$1,174), the average median cost for Caucasians was 39% more, while for African-Americans it was about 13% less.
- The greatest difference in median costs was between Caucasian males (\$1,796) and African-American females (\$638). In other words, the median cost for Caucasian males was almost three times that of African-American females.

Conclusions

- Age and gender profiles were similar. The slightly higher eligibility length for African-Americans is probably not significant enough to substantially impact use of HealthChoices services.
- Outpatient mental health services and BHRS were the most commonly used services. In cases where significant differences were detected, the proportional use of services by Caucasians was more than that of African-Americans.
- Based on the number of consumers who used two or fewer units of outpatient mental health services or only one unit of service, the two races were comparably engaged with outpatient mental health services during 2002.
- Median costs in general were higher for Caucasians than African-Americans.

Major Depression and Affective Psychoses Profile

Profile of consumers with major depression and affective psychoses

Studies indicate that at any one time, 10-15% of the child and adolescent population suffers from some symptom of depression (SGR 151). However, as a result of lack of research attention, most inferences about this group are in fact extrapolations of studies of adult populations. Gender differences are not prominent until the age of 15, but females are twice as likely as males to be diagnosed with these disorders thereafter. Approximately two-thirds of children and adolescents diagnosed with major depression also had another associated mental disorder. While the exact causes of major depression are not fully understood, experts agree that they are a combination of biological and psychosocial factors. There is a high probability that depressed adults were also depressed as children and adolescents, which makes the early detection and treatment of major depression crucial (SGR 152-154).

The following profile outlines the characteristics and service use patterns of children diagnosed with these disorders during 2002 in the Allegheny County HealthChoices population.

Age and gender characteristics by race

- Two thirds of consumers diagnosed with these disorders were Caucasian, while 31% were African-American.
- About 60% of consumers diagnosed with this disorder in both racial groups were female.
- The 13-17 year age group accounted for close to half of consumers from both groups (51% for African-Americans and 47% for Caucasians). Caucasians were more likely to be in the oldest age group than African-Americans (37% vs. 29%). There were proportionally more African-Americans than Caucasians in the 6-12 year age group (20% vs. 14%).
- Thus the age profiles for the two groups were slightly different, while the gender profiles were more homogenous.

HealthChoices eligibility type and length by race

- 55% of African-Americans were enrolled in HealthChoices through TANF (compared to 36% of Caucasians). Proportionally more Caucasians than African-Americans were enrolled in HealthChoices through SSI (39% vs. 32%) and Healthy Beginnings (20% vs. 10%).
- 64% of African-Americans and 58% of Caucasians had full-year HealthChoices eligibility. For those consumers with less than a full-year's eligibility, African-Americans were eligible for an average of 8 months, compared to 7 months for Caucasians.

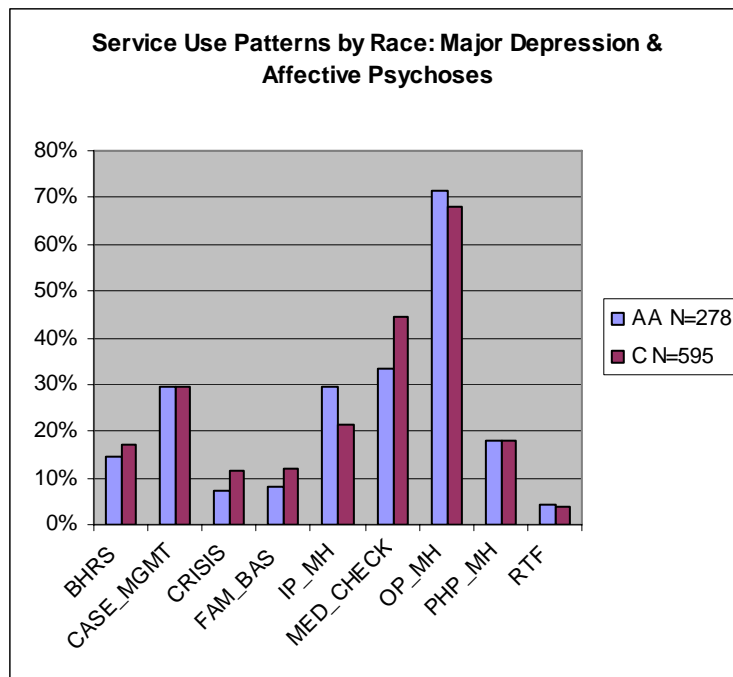
Discussion

The gender profiles were similar while there were some differences in the age profiles by race. The eligibility lengths for both races were comparable. The differences in the age profiles may have impacted the utilization of services.

First service received under HealthChoices by race

- 49% of all consumers received outpatient mental health as their first service, followed by inpatient mental health with 11.8%.
- African-Americans were proportionally more likely than Caucasians to use outpatient mental health services (54% vs. 48%) and inpatient mental health services (17% vs. 9%) as a first service. There were no differences greater than 5% in "first service used" between races for other service categories, though Caucasians used case management and medication checks in slightly higher proportions than African-Americans.
- Other service categories were used less than 10% of the time as a first service.

Service use patterns by race



As shown in the chart above:

- African-Americans used inpatient mental health services in larger proportions than Caucasians (29% vs. 22%). On the other hand, Caucasians used medication checks (45% vs. 33%) in larger proportions than African-Americans.
- Proportional use of all other services by race showed no significant differences.
- 39% of African-Americans (108 out of 278) and 38% of Caucasians (225 out of 595) diagnosed with major depression used only one service type during 2002.

Amounts of services used

- When comparing median use, African-Americans used 17% more inpatient hospitalization (10 units vs. 8.5 units). On the other hand, Caucasians used 50% more outpatient mental health services (6 units vs. 4 units) than African-Americans.
- For services where a larger number of units were used, African-Americans used 27% more partial hospitalization (121 units vs. 95 units) and 15% more BHRS than Caucasians (421 units vs. 365 units). On the other hand, Caucasians used 36% more family-based treatment (373 vs. 275 units) and 53% more RTF than African-Americans (161 vs. 105 units).
- 38% of African-Americans and 26% of Caucasians had *two or fewer units* of outpatient mental health service. The difference indicates that Caucasians may have been more likely than African-Americans to engage with outpatient mental health services.
- 89 consumers had *just one unit* of service in 2002. Of these, 34 were African-American (12% of all African-Americans in this diagnostic group) and 55 were Caucasian (9% of Caucasians in this diagnostic group).
- For consumers who used *only one service*, Caucasians used more units of outpatient mental health (4 units vs. 3 units) than African-Americans, while African-Americans used 75% more of inpatient mental health services than Caucasians (7 units vs. 4 units). For all other categories, the

number of consumers in one or both racial groups, was less than 10 and were excluded from further discussion.

- Since the number of African-American consumers who qualified for the “loophole” and were diagnosed with major depression for all service categories was small (less than 10), we compared services used (by units) for *African Americans who did not qualify for the “loophole” and Caucasians who qualified for the “loophole.”* African-Americans who did not qualify for the “loophole” used more outpatient mental health (4 units vs. 2 units) and 18% more family-based treatment (392 units vs. 332 units) than Caucasians who qualified for the “loophole.”
- On the other hand, Caucasians who qualified for the “loophole” used 500% more partial hospitalization (566 units vs. 113 units), 17% more case management (183 units vs. 156 units) and 15% more BHRS (469 vs. 408 units) than African-Americans who did not qualify for the “loophole.”

Cost profile by race and gender

Race/gender	# Cons.	Mean (\$)	Median (\$)
AAF	174	6,251	174
AAM	104	11,392	4,453
African-American Total	278	\$8,174	\$2,154
CF	350	6,492	938
CM	245	10,949	2,712
Caucasian Total	595	\$8,327	\$1,421

- Median costs for African-Americans were 52% more than those for Caucasians (\$2,154 vs. \$1,421). The diagnostic group median is \$1,674, which makes median costs for Caucasians 15% *below* the diagnostic group average.
- The greatest difference was between African-American females (\$174) and males (\$4,453), a factor of 25. Similarly, costs for Caucasian women were roughly a third of Caucasian male costs. This suggests that gender was a more influential determinant of costs than race.

Conclusions

- The gender profiles were similar while the age profile exhibited some differences. African-Americans were eligible for longer periods than Caucasians.
- Outpatient mental health was the most commonly used service. Caucasians diagnosed with major depression were significantly more likely to use two or more units of outpatient mental health than African-Americans, which suggests that Caucasians were somewhat more engaged with outpatient mental health services than African-Americans.
- Proportionally, Caucasians were more likely to use medication checks than African-Americans, indicating different treatment patterns by race.
- Median costs as a group were higher for African-Americans than Caucasians. Males in both groups had considerably higher costs than females of their respective groups, which suggest that gender is an important determinant of costs for these diagnoses.

Neurotic and Other Depressive Disorders Profile

Profile of consumers with neurotic and other depressive disorders

This diagnostic category includes panic disorders, obsessive-compulsive disorders, social phobia and several other disorders. Panic disorders and social anxiety disorders are more commonly diagnosed in women. Studies have failed to identify any distinct racial or ethnic patterns for these diagnoses. Younger boys are more likely to suffer from obsessive compulsive disorder, though the differences are less pronounced in adults. These disorders are caused by a mix of biological and psychosocial factors. There is evidence to show that these disorders if left untreated in children or adolescents can persist into adulthood (SGR 160-163).

The following profile outlines the characteristics and service use patterns of children diagnosed with these disorders during 2002 in the Allegheny County HealthChoices population.

Age and gender characteristics by race

- Approximately 62% of consumers diagnosed with neurotic disorders were Caucasian (725 out of 1,175) while 36% were African-American (419 out of 1,175).
- The gender profiles were similar. Consumers of both races were nearly equally divided by gender.
- About half of African-Americans and Caucasians were between 13-17 years of age. Proportionally, there were more African-Americans in the 6-12 year age group than Caucasians (32% compared to 25%), while the converse was true for the 18-20 year age group (23% Caucasian vs. 15% African-American).

HealthChoices eligibility type and length by race

- 62% of African-Americans were enrolled in HealthChoices through TANF (compared to 41% of Caucasians). Proportionally, more Caucasians than African-Americans were eligible through SSI (34% vs. 26%) and Healthy Beginnings (23% vs. 12%).
- 73% of African-Americans and 62% of Caucasians had full-year HealthChoices eligibility. For those consumers with less than a year's eligibility, African-Americans were eligible for 7.7 months compared to 6.9 months for Caucasians.

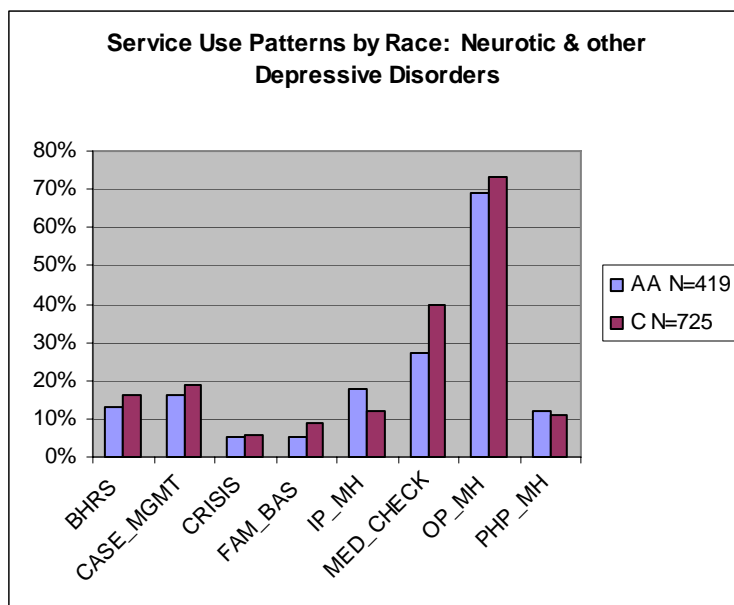
Discussion

The gender profiles by race were similar, but Caucasians were more likely to be older. African-Americans were enrolled for longer periods than Caucasians. If African-Americans used fewer units of services, it was for reasons other than eligibility length.

First service received under HealthChoices

- 62% of all consumers received outpatient mental health as their first service, while inpatient mental health and BHRS were other commonly used first services, each accounting for approximately 8% of all consumers.
- Proportionally, African-Americans used more inpatient mental health services (11.7% vs. 5.8%).
- For all other services, there were no differences greater than 5% in proportional use between races. However, Caucasians used BHRS and case management in slightly higher proportions than African-Americans.

Service use patterns by race



As shown in the chart above:

- African-Americans proportionally were more likely to use inpatient mental health (18% vs. 12%). Caucasians were more likely to use medication checks (40% vs. 27%).
- For almost all other service types, proportional use by Caucasians was slightly higher than African-Americans, though for no service did the difference exceed five percentage points.
- 53% of African-Americans (223 out of 419) and 47% of Caucasians (340 out of 725) diagnosed with neurotic and other depressive disorders used *only one* service type during 2002.

Amounts of services used

- When comparing median use, Caucasians and African-Americans used comparable amounts of inpatient mental health services (8 units vs. 9 units) and medication checks (3 units vs. 2 units).
- For services which involved a higher number of units, African-Americans used 12% more partial hospitalization services than Caucasians (128 units vs. 115 units). On the other hand, Caucasians used 21% more case management (178 vs. 147 units) and 16% more BHRS (335 units vs. 288 units) than African-Americans.
- 31% of African-Americans and 29% of Caucasians used *two or fewer units* of outpatient mental health services. Thus, with respect to engagement with outpatient mental health services, there was no significant difference between the two races.
- For consumers who used *only one* service type, Caucasians used slightly more outpatient mental health services (5 units vs. 4 units) and 66% more units of case management (118 units vs. 71 units) than African-Americans. For all other service categories, the differences were either not significant or the number of consumers in one (or both) groups was too small for valid comparisons to be made.
- 123 consumers diagnosed with neurotic disorders used *only one unit* of service. Of these, 54 were African-Americans (13% of all African-Americans in this diagnostic group) and 66 were Caucasians (9% of all Caucasians in this diagnostic group).

Does Race Matter?

- African-Americans who did not qualify for the “loophole” used more outpatient mental health services (6 units vs. 3 units) and 39% more family-based services (272 units vs. 196 units) than Caucasians who qualified for HealthChoices through the “loophole.”
- Caucasians who qualified for HealthChoices through the “loophole” used 229% more partial hospitalization (293 units vs. 128 units), 25% more case management (183 units vs. 147 units) and 29% more BHRS (372 units vs. 288 units) than African-Americans who did not qualify for the “loophole.” For all other service categories, either the differences were not significant, or the number of consumers in one or both racial groups was too small for valid comparisons to be made.

Cost profile by race and gender

Race/gender	# Cons.	Mean (\$)	Median (\$)
AAF	222	4,507	535
AAM	197	5,591	908
African-American Total	419	\$5,017	\$696
CF	359	4,773	540
CM	366	5,137	844
Caucasian Total	725	\$4,957	\$628

- The median cost for African-Americans was 11% higher than that of Caucasians (\$696 vs. \$628). Median costs for Caucasians were slightly below the median cost for the diagnostic group as a whole.
- The greatest difference in median costs was between African-American females (\$535) and Caucasian males (\$844), a difference of 58%.

Conclusions

- Gender profiles were similar, while age profiles showed some differences. Eligibility lengths were comparable.
- Outpatient mental health services were the most commonly used services for both races. Both races had similar patterns of outpatient mental health utilization.
- Median costs were comparable by race, with African-Americans having a slightly higher median cost compared to Caucasians. Caucasian males had the highest median costs, while African-American females had the lowest costs.

Stress and Adjustment Reactions Disorders Profile

Profile of consumers with stress and adjustment related disorders

This diagnostic group includes several disorders: separation anxiety disorder, posttraumatic stress disorder, acute stress disorder and all other adjustment disorders. Emotional and behavioral symptoms of these disorders develop as a “psychological response to an identifiable stressor or stressors.” The disorders in this category vary based on the severity of the stressor or trauma and the severity of the resulting impairment (DSM IV-TR 679). Separation anxiety disorder is common (affecting 4% of children and young adolescents), and decreases with age. Prevalence rate estimates vary widely but have not shown differences by race in adjustment disorders. Females may have these disorders at higher rates. “Individuals from disadvantaged life circumstances experience a high rate of stressors and may be at increased risk for these disorders” (DSM IV-TR, 123, 463, 681).

The following profile outlines the characteristics and service use patterns of children diagnosed with these disorders during 2002 in the Allegheny County HealthChoices population.

Age and gender characteristics by race

Consumers received stress and adjustment disorder diagnoses with the highest frequency; 2,191 (24%) of all consumers had one of these diagnoses.

- 57% of consumers diagnosed with stress and adjustment reactions were Caucasian, while 41% were African-Americans.
- About half of consumers were male and half female in both racial groups.
- There were proportionally more Caucasians than African-Americans in the 0-5 year age group. Collectively, the 6-12 and 13-17 year age groups accounted for over 80% of the total number of consumers for both racial groups.

HealthChoices eligibility length and type by race

- 73% of African-Americans were eligible for HealthChoices through TANF, compared to 51% of Caucasians. Proportionally, more Caucasians were eligible for HealthChoices through Healthy Beginnings than African-Americans (34% vs. 12%), while the corresponding proportions for SSI were the same for both racial groups (14%).
- 80% of African-Americans and 73% of Caucasians had full-year HealthChoices eligibility. Of those with less than a year's eligibility, African-Americans were eligible for 8.6 months, compared to 7.8 months for Caucasians.

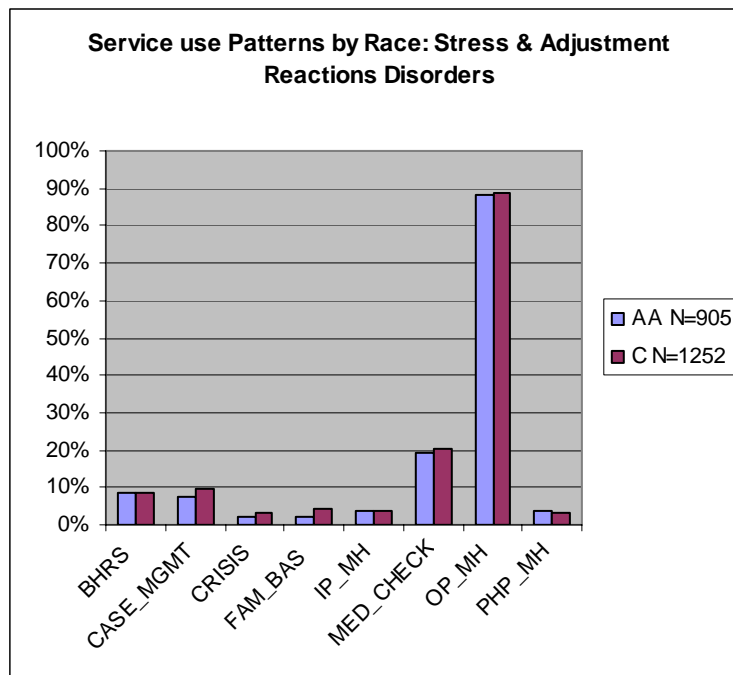
Discussion

The age and gender profiles were quite similar. African-Americans had slightly higher eligibility lengths than Caucasians, which implies that if African-Americans used fewer amounts of services, it was for reasons other than eligibility length.

First services received under HealthChoices

- About 82% of consumers diagnosed with stress and adjustment disorders used outpatient mental health as their first service, regardless of their race. BHRS was used by 4.3% of consumers as a first service, while other services were used even less frequently. Caucasians proportionally used BHRS slightly more than African-Americans.

Service use patterns by race



- As the chart above indicates, African-Americans and Caucasians used nearly identical services. Outpatient mental health was, by far, the most commonly used service.
- 71% of African-Americans (642 out of 905) and 70% of Caucasians (882 out of 1252) used only one service during 2002.

Amounts of services used

- When comparing median use, African-Americans used 20% more units of family-based services (311 units vs. 260 units). On the other hand, Caucasians used 10% more case management (159 units vs. 144 units) and 73% more units of BHRS (267 units vs. 154 units). For all other services, no significant differences in the amounts of services used were found.
- 25% of African-Americans and 22% of Caucasians used *two or fewer units* of outpatient mental health services. On the whole, African-Americans and Caucasians used similar amounts of outpatient mental health services (9 units vs. 8 units). Thus, with respect to outpatient mental health services the engagement levels by race were comparable.
- For consumers who used *only one service*, median use of BHRS by Caucasians was more than 4 times that of African-Americans (307 vs. 75 units). Caucasians also used 16% more case management than African-Americans (67 units vs. 58 units). For all other services, either the differences in amounts of service used or the number of consumers in one (or both) racial groups was too small for analysis.
- 282 consumers diagnosed with stress and adjustment reactions (13% of the total number of consumers with stress and adjustment related disorders) used *only one* unit of service during 2002. Of these, 127 were African-Americans (14% of all African-Americans diagnosed with stress and adjustment reactions) and 148 were Caucasians (12% of all Caucasians diagnosed with stress and adjustment reactions).

Cost profile by race and gender

Race/gender	# Cons.	Mean (\$)	Median (\$)
AAF	430	1,849	393
AAM	475	1,684	420
African-American Total	905	\$1,762	\$420
CF	636	2,200	360
CM	616	2,619	420
Caucasian Total	1,252	\$2,406	\$390

- Median costs for African-Americans diagnosed with stress and adjustment disorders were 8% higher than for Caucasians.
- When comparing gender and race groups, the median costs were also similar, with the greatest difference between Caucasian males and females (\$420 and \$360 respectively).
- The range for African-American women was the greatest, which indicates higher variability in costs for that group compared to other groups.

Conclusions

- The percentage of consumers of both races who were eligible for HealthChoices through TANF was larger than for other groups. This suggests a larger proportion of lower-income people in this diagnostic group as compared to other groups. Considering that individuals living in poverty are probably at higher risk for these disorders, this trend is expected.
- In comparison to other diagnostic groups, African-American and Caucasian consumers with stress and adjustment disorders used very similar patterns and amounts of services.
- Median costs by race were very similar; treatment was also less costly for consumers with these diagnoses than other diagnoses.

Technical Appendix

The methodology used to assign consumers to one primary diagnostic category using claims data follows the methodology developed by the Substance Abuse and Mental Health Services Administration (SAMHSA) in a study of Medicaid claims paid for mental health and substance abuse services (Buck 1).

Service providers are required to submit a primary diagnosis on each claim submitted for payment, using the ICD-9 diagnostic coding system. Consumers were assigned to a diagnostic category based on the ICD-9 diagnostic code used on their claims.

- For consumers who had more than one diagnostic code used on their claims within 2002, the diagnosis used most frequently (i.e. for the largest number of units billed) was used to assign the consumer to a diagnostic category. 30% of consumers had more than one diagnostic code used within 2002.
- For consumers who had multiple diagnoses each with the same number of units, diagnoses received for inpatient services took precedence over diagnoses received for outpatient services. In these cases, the first diagnosis received for an inpatient service within the year was used. Non-inpatient services were then organized from most restrictive/intensive to least restrictive/intensive, and consumers were assigned to a diagnostic category based on the first diagnosis used in 2002 for the most intensive/restrictive service. This methodology was used for 0.6% of consumers.

Because the ICD-9 coding system includes a large number of possible diagnoses, individual diagnostic codes were grouped into diagnostic categories. The categories are also based on categories used by SAMHSA in similar analyses. Twelve mental illness categories and one substance use disorder category were used (see table below).

A number of limitations to the diagnostic data should be clarified. First, because claims data uses the primary diagnosis, other relevant diagnostic information that would be present in a medical chart is not accessed. Because a substance use disorder may not be the primary diagnosis, co-occurring disorders are underreported when relying on claims diagnosis information. Second, because diagnosis is assigned based on the largest number of units of service received, services with shorter units (15 minute units vs. day units, for example) have a larger influence on the diagnosis assigned. Third, a large number of consumers received more than one diagnosis within the year. This could suggest some level of inaccuracy in the information submitted on the claims or actual changes in a consumer's diagnosis within the year. Diagnoses will often change with the development of the child and changes in the child's environment; therefore, it is reasonable to expect that primary diagnoses may change within a year or less.

ICD-9 Codes Used in Diagnostic Categories
Attention-Deficit and Disruptive Behavior Disorders (314 ICD-9 codes)
Childhood psychoses (299 ICD-9 codes) Includes autistic disorder, Asperger's disorder, and pervasive development disorder.
Conduct disorders (312 ICD-9 codes)
Drug and Alcohol related disorders <ul style="list-style-type: none"> • Includes drug psychoses, (292 ICD-9 codes), drug dependence and nondependent drug abuse (304, 305.2 - 305.9 ICD-9 codes), alcoholic psychoses (291 ICD-9 codes), alcoholic dependence and nondependent alcohol abuse (303, 305.0 ICD-9 codes)
Emotional disturbances (313 ICD-9 codes) <ul style="list-style-type: none"> • Includes oppositional defiant disorder and other less common disorders
Major depression and affective psychoses (all 296 ICD-9 codes) <ul style="list-style-type: none"> • Includes manic disorders (single and recurrent episodes), major depressive disorder (single and recurrent

episodes), bipolar affective disorder, manic-depressive psychosis, and other/unspecified psychosis
Neurotic & other depressive disorders (300, 311 ICD-9 codes) <ul style="list-style-type: none"> • Includes panic disorder, generalized anxiety disorder, obsessive-compulsive disorder, depressive disorder (not otherwise classified), dysthymic disorder, and conversion disorder
Other mental disorders (302, 306, 310 ICD-9 codes)
Other psychoses (297, 298 ICD-9 codes) <ul style="list-style-type: none"> • Includes paranoia and paranoid states, depressive and excitative type psychoses, unspecified psychoses.
Personality disorders (301 ICD-9 codes)
Schizophrenic Disorders (all 295 ICD-9 codes)
Special symptoms or syndromes (307 ICD-9 codes) <ul style="list-style-type: none"> • Includes eating disorders and sleep disorders.
Stress & adjustment reactions (308, 309 ICD-9 codes) <ul style="list-style-type: none"> • Includes posttraumatic stress disorder, acute stress disorder, separation anxiety disorder, and adjustment disorders

Service Description Appendix

Behavioral health rehabilitation services (BHRS): Treatment and therapeutic interventions prescribed by a psychologist or psychiatrist provided on an individual basis in the person's own environment such as the home, school and community. These services include Therapeutic Support Staff (TSS), Behavioral Specialist Consultants (BSC), Mobile Therapy (MT) and specialized services, as approved. * Units vary in length, depending on whether they are BSC, MT or TSS.

Case management services: Services provided to assist children, adolescents and adults with serious mental illness or emotional disturbance to obtain treatment and supports necessary to maintain a healthy and stable life in the community. Caseload sizes are limited to ensure adequate attention to the person's needs as they change. Emphasis is given to housing, food, treatment services, use of time, employment and education. Intensive case management services are available 24 hours a day, 7 days per week.* Units were 15 minutes in 2002.

Family-based services: Evaluation and treatment services provided to a specific child in a family, but focuses on strengthening the whole family system to increase their ability to successfully manage their child's behavioral and emotional issues. Services are provided by licensed agencies employing a mental health professional and a mental health worker as a team to provide treatment and case management interventions. Services are provided in the home of the family.* Units were 15 minutes in 2002.

Halfway House: A residential program to assist people in their recovery from drug and alcohol addictions. Halfway Houses are transitional programs to support people in their re-integration in the community. One unit is equivalent to one day of service.

Inpatient mental health services: Evaluation and treatment services provided in a licensed psychiatric unit of a community hospital or a community psychiatric hospital that is not part of a medical hospital. Services are provided to persons with acute illness where safety for self or others is an issue. Services are provided by psychiatrists, nurses and social services staff. Persons may be involuntarily committed for evaluation and treatment.*

Medication check: A service provided for consumers taking medication to treat their mental illnesses or substance abuse disorders. Medication levels are checked, side effects discussed, and adjustments to prescriptions are made as necessary. One unit was equivalent to one medication check visit.

Non-hospital rehabilitation services: Treatment services provided in a licensed community residential program where a full range of treatment and supportive services are provided for the addicted person in acute distress. Interventions include social, psychological and medical services to assist the person whose addiction symptomatology is demonstrated by moderate impairment of social, occupational, and/or school functioning. Rehabilitation is a treatment goal.* One unit is equivalent to one day of service.

Outpatient drug and alcohol services (OP-D&A): Evaluation and treatment services provided at a licensed facility to persons who can benefit from psychotherapy and substance use/abuse education. Services are provided in regularly scheduled treatment sessions for a maximum of 5 hours per week by qualified D&A treatment staff.* This category includes several services and codes; most had a 30-minute unit in 2002.

Outpatient mental health services (OP-MH): Evaluation and treatment services provided to persons who may benefit from periodic visits that may include psychiatric and psychological evaluation, medication management, individual or group therapy. Services are provided by licensed facilities under

* Service descriptions are quoted from The Office of Mental Health and Substance Abuse Services (OMHSAS), available at <http://www.dpw.state.pa.us/omhsas/omhchoices.asp>.

the supervision of a psychiatrist or by private credentialed practitioners.* This category includes several services and codes; most had a 30-minute unit in 2002.

Partial hospitalization mental health program (PHP-MH): Treatment services provided from 3 to 6 hours per day up to 5 days per week in a licensed facility. Evaluation, treatment and medication are provided under the supervision of a psychiatrist for persons who need more intensive treatment than psychiatric outpatient. Services are provided for a short duration of time for persons acutely ill and for longer periods for persons experiencing long-term serious mental illness.* For children and adolescents, about 82% of partial hospitalization services were school-based, and 8% acute. School-based services are provided in an approved private school.

Residential treatment facility (RTF): Comprehensive mental health treatment services for children with severe disturbances or mental illness. These services are provided in Residential Treatment Facilities (RTF's) which must be licensed by OCY&F under Chapter 3800. The facility must have a service description approved by OMHSAS, be certified by OMHSAS through annual on-site review, have a utilization review plan in effect and be enrolled in the MA program.* One unit is equivalent to one day of service.

Supplemental drug and alcohol services (Supp Serv DA): This category of services includes drug and alcohol treatment programs that are paid for by Community Care but are not required or covered services under HealthChoices. For the adolescent population in 2002, this primarily included intensive drug and alcohol outpatient services.

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